

Soybean Digest

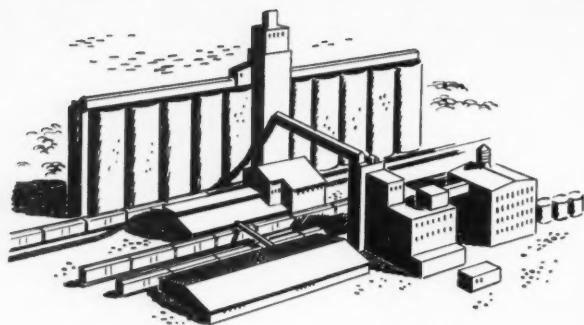


M. L. Cohn, Sr., Director from Missouri (Page 28).

Official Publication
AMERICAN SOYBEAN ASSOCIATION

VOLUME 10 • NUMBER 7

MAY • 1950



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If you use solvents for extraction purposes, remember these basic reasons why *Skellysolve* is used so widely throughout the industry.

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THE Soybean Digest

REG. U. S. PAT. OFF.

HUDSON, IOWA

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Advertising representatives: Ewing Hutchison Co., 35 E. Wacker Drive, Chicago 1, Ill.

Vol. 10 MAY * 1950 No. 7

Published on the 10th of each month at Hudson, Iowa, by the American Soybean Association. Entered as second class matter November 20, 1940, at the postoffice at Hudson, Iowa, under the Act of March 3, 1879. Forms close on 25th of month preceding. Subscription price to association members, \$2.50 per year; to non-members, \$3.00 per year; Canada and other members of the Pan-American Union, \$3.50; other foreign, \$4.00.

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THE AMERICAN SOYBEAN ASSOCIATION

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MAY, 1950

Newly
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TROUGH ENDS

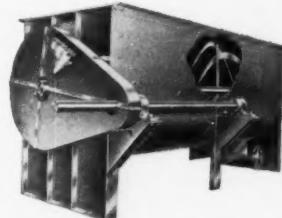


These trough ends are made of plate steel bodies with inter-changeable and detachable ball or babbitt flange bearings. These trough ends were designed for longer life, quicker, easier and more economical change-overs. On these units only the hub bearing wears out leaving the trough end unharmed. Therefore in your change overs the prices of the hub bearings are only about one half the price of the old solid piece trough ends. Our counter shaft trough ends are of this same design. Shipments on both units can be made from stock. We manufacture a complete line of screw conveyors and accessories and shipments can also be made from stock.

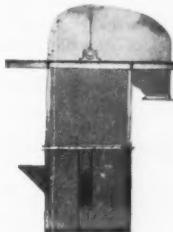
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Specifications

All metal elevators complete with head, boot, legging and machinery made to your individual specifications. This is an all metal unit and insures longer wear and dust-tight performance. Head and boot is furnished with shaft mounted on ball or babbitt bearings. Boots come with large slide clean out doors. Furnished with cotton or rubberized belt and high speed cups.

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EDITOR'S DESK

LET'S KEEP CLEAR OF CONTROLS

At this writing no announcement has been made on the support price of 1950 crop soybeans. None is expected until the Commodity Credit Corporation bill to increase borrowing power has been passed by Congress, which may come at any time. If this announcement has not yet been made when you receive this issue of the Soybean Digest, it will be made shortly. When it comes that support price must, of necessity, be appraised on the basis of its correct relationship to other commodities, especially cottonseed.

In his report on the CCC price support program as of Mar. 1, 1950, President Ralph S. Trigg reported over \$4 billion invested in price-support loans and inventories. A net loss of \$130 million was reported for the current fiscal year through March. Some soybeans were still under loan on that date. But, with rising prices probably CCC will take title to no soybeans this year.

Our industry's record is a very enviable one. Never, so long as USDA has been engaged in price support activities, has the soybean crop failed to pay its own way and make a profit. Soybeans have never cost the U. S. taxpayer a penny. In fact, on several occasions rather sizable gains have been recorded on the handling of soybeans by government.

We hope the 1950 support price will be one which can be justified from the standpoint of both producer and consumer—one which will allow our soybeans to find their way into world markets through normal channels of trade, and one which will be conducive to heavy feeding of soybean meal by livestock feeders and heavy usage of soybean oil in food and industry.

Given a reasonable support price there is no reason why soybeans should cost CCC a penny in 1950—and no reason why there should be talk of acreage controls for 1951. Let's keep our industry free of governmental shackles—let's find out how many soybeans the world can use to advantage—then let's produce those beans at a reasonable profit to the producer and to the handlers.

PRICING OURSELVES OUT OF MARKET

High soybean prices (above \$3 Chicago at this writing) have made it impossible to sell soybeans in world markets. Speculative prices—and speculation seems to be about the only explanation of present levels—are doing the industry much harm. Wide price fluctuations in soybean prices at the time of year when a high percentage of the stocks is owned by persons other than the grower tend to discourage growers, rather than encourage them.

Current prices can not be justified on the basis of processing yields. The processor could not buy soybeans today, run them through his plant, sell the meal and oil at today's prices and pay his costs.

To the occasional grower of soybeans who is still holding his crop the current price bulge is welcomed—but with a surprised look. He is profiting by it—if he gets out in time. But for the long pull these high prices are materially damaging our chances of placing American soybeans in world markets. So long as wide fluctuations take place without apparent reason foreign buyers are going to be mighty cautious. They are going to turn

to commodities less subject to fluctuation, and on which adequate supplies are available. When they turn to other commodities they are not to be won back easily.

When the 1950 soybean crop begins to move we are going to be hoping and praying for buyers. Today we are driving them away. We are forcing the purchase of Manchurian soybeans, of lard, of other commodities.

The soybean industry must grow up—price-wise. We must stabilize prices through the year. If we are going to supply world markets we must have not only adequate supplies but prices less subject to violent fluctuations. Until we do so someone else will outsell us.

SHORTENING EXTENDERS HARMFUL

Positive medical evidence showing injurious (toxic) effects exerted on animals by ingredients of chemical products being sold as "shortening extenders" has now been published. Up for consideration by Food and Drug Administration for some time, an early ruling by that agency is now expected. Chemical "fat extenders" have been used rather extensively in some fields during recent years in order to cut costs.

Widespread use of chemical "extenders" would cause loss of a huge slice of the market for soybean oil in shortenings. Estimates of the replacement have run from 600 million to 1 billion pounds of edible oils per year.

Special feeding studies to determine effects of "extender" agents on diets of rats and hamsters were conducted by several research organizations, sponsored by the Institute of Shortening and Edible Oils and the American Meat Institute Foundation. Results, just released at the Atlantic City meeting of the American Institute of Nutrition, show marked toxic and other deleterious effects when animal diets included amounts of polyoxyethylene, principal ingredient of "shortening extenders."

Based on these tests, it is expected Food and Drug Administration will ban or severely limit the use of such products in bread, rolls and buns in the rulings which are expected to be announced shortly. *The soybean industry has a huge market at stake here!*

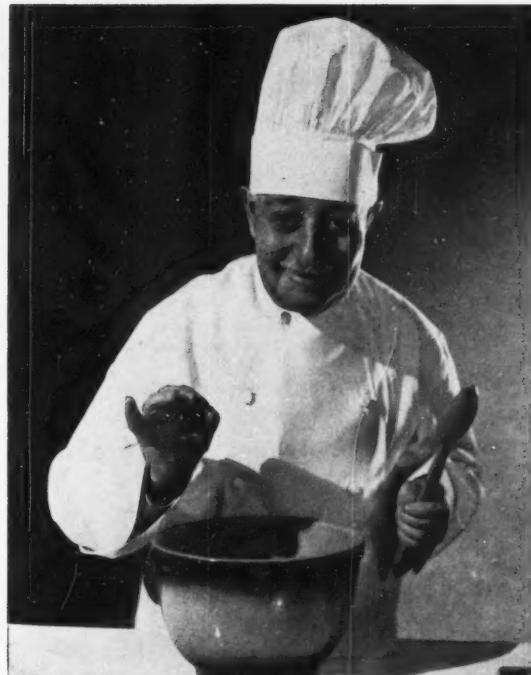
RESEARCH SHOULD BE EXPANDED!

Research in the usage of agricultural commodities is basic to continued progress. That is particularly true with soybeans, for the crop is relatively new.

The Oilseed and Peanut Advisory Committee of RMA has recommended continued and increased research on flavor stability of soybean oil. It has been established as the project carrying the highest priority. Unquestionably every possible effort should be expended to determine why soybean oil flavors are unstable. Soybean oil has many attributes. When basic research determines why it is not stable, and learns how to stabilize it, the possibilities are almost unlimited.

We favor economies in government. We believe it is imperative that our nation live within its means.

We believe economies can be effected in the Department of Agriculture. We know of many duplications of work, many unnecessary expenditures. But we also believe it imperative that Congress, in its zeal to cut expenditures, recognize what research means to agriculture and that no unnecessary cuts be made in the funds expended for actual research in basic agriculture. In times of surpluses we should be doing more research work in product utilization, rather than less.



THE RIGHT INGREDIENTS...

that's the difference between success and failure. That's why PRE-TESTED NOD-O-GEN has found such great acceptance by the farmers of America . . . it has the right ingredients. PRE-TESTED NOD-O-GEN is available with the proper multiple strains of root nodule bacteria for each different group of legumes.

Dealers, it is a wise and profitable investment to stock all the proper strains of PRE-TESTED NOD-O-GEN.

Be ready to sell your farmer customers the proper strains of PRE-TESTED NOD-O-GEN for their particular needs.

Send for the name of your nearest PRE-TESTED NOD-O-GEN jobber. PRE-TESTED NOD-O-GEN is packed in practical size packages for all common legumes. Special cultures are available for little known but promising legumes.

ADDITIONAL PRODUCTS WITH THE RIGHT INGREDIENTS

2. 4-D Killers

Liquid or powder forms. Regular strength and concentrates. Amines or esters. A complete assortment: 8 oz. to — carloads.

Hormones

Fruitone, Rootone, Transplantone, Tubertone,

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Ceresan, Arasan, Tersan, Semesan Bel, Semesan Jr., Spergon, Etc.

Rat Killers

Tate Formula "83" containing ANTU.

Soil Testing Kits

Sudbury — Wide range of sizes.

Sprout Inhibitors

Barsprout for all root crops, particularly potatoes, enable storage of "old" potatoes well up into spring.

Fertilizer

Ford Ammonium Sulphate for horticultural use — 10 lbs., 50 lbs., 100 lbs.

Sprayers

"GAT" sprayers for home lawn use.

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NOD-O-GEN



The Pre-Tested Inoculator
The Crop and Profit "PepperUpper"

ACTIVITIES OF YOUR ASSOCIATION

CONTINUE OIL RESEARCH?

The work on soybean flavor research at the University of Pittsburgh apparently will be continued at the present level for another 2 years in spite of a pending cut by Congress of almost a million dollars in Research and Marketing Act appropriations.

Fears that the research on soybean oil flavor stability might be jeopardized were raised when the House appropriations committee reported out HR 7786 with research funds cut back \$900,000. It is expected that the Senate committee will

take similar action in cutting research appropriations.

The American Soybean Association is backing expanded research on the flavor stability problem of soybean oil, since the oil's lack of flavor stability is its chief handicap for use in foods. Leaders in the food industries say that with correction of this problem soybean oil will be superior to all other oils as a food oil.

The Oilseeds and Peanut Advisory Committee has recommended that work on the flavor stability of soybean oil be accelerated. ASA's J. B. Edmondson, Danville, Ind., is a member of this committee. (See let-

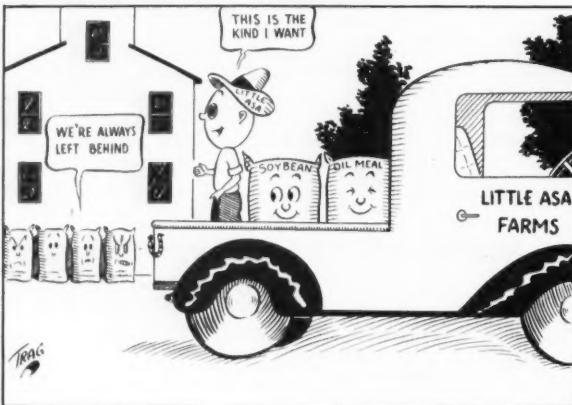
ter from Maurice R. Cooper on page 58 this issue.)

As soon as the appropriation act was reported out in its present form, letters were written from the executive office as well as by members of the legislative committee in an attempt to learn how the cut would affect oil flavor research.

Members of the appropriations committee have assured your officials that the intent is to cut out duplicated effort in the Department of Agriculture and not to cripple research programs.

And the Northern Regional Research Laboratory is now consummating a contract with the University of Pittsburgh to continue the work now under way there on the improvement of flavor stability of soybean oil. G. E. Hilbert, chief of the Bureau of Agricultural and Industrial Chemistry, has written ASA Secretary-Treasurer Geo. M. Strayer.

SOYBEAN OIL MEAL Is AHEAD in the FEED LOT too



Scientific tests have proved that soybean oil meal is the best protein feed money can buy. Check the label of all feeds you buy for soybean oil meal content.

Adv. prepared by American Soybean Association, Hudson, Iowa

YOUR FIRM NAME

NOTICE: This advertisement is the second of a series on soybean oil meal designed for publication in newspapers. Feed dealers, processors, elevators and others who would benefit from these advertisements are invited to write for free mats to American Soybean Association, Hudson, Iowa.

ORDER YOUR MATS NOW

Here is the second of a series of ads promoting the sale of soybean oil meal. Free mats of the series are yours for the asking.

Promoting the sale of soybean oil meal will soon be one of the big jobs facing the industry. With pos-

sibly the biggest soybean crop in history coming up, building new markets and moving supplies of soybean oil meal will be a bigger job than ever next year.

The series of ads was prepared to help the industry do that job. They are designed to run in local newspapers over the firm names of processors, feed dealers or elevators.

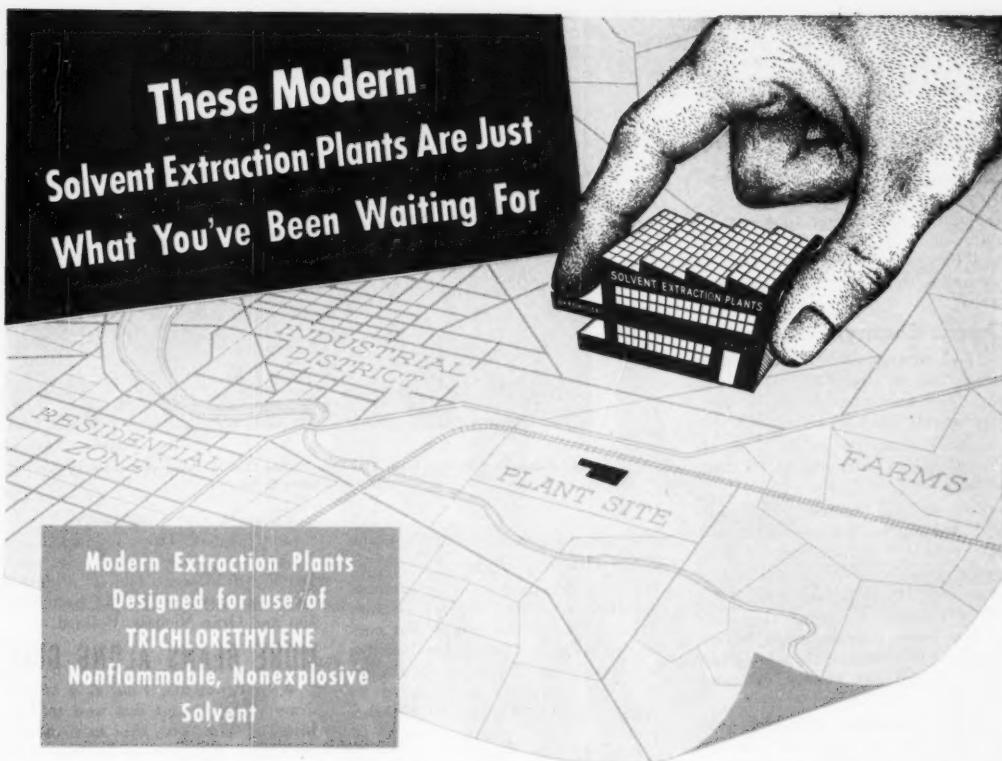
Friendly Little Asa—the original "Mr. Soybean"—will help you get the message that soybean oil meal is the best protein feed money can buy across to readers through these eye-arresting cartoons. Readers get the point at a glance.

The ads are part of the program being carried on by the joint support of participating producers, processors and grain handlers.

A postcard will bring the mats to you. How many do you wish?

And please let us know what you think of the ads. Will they do a real job for soybean oil meal and the feed industry?

If so, they should be running in a lot of newspapers.



THEY'RE HERE—ready to be designed and built to your requirements by competent, responsible manufacturers of extraction equipment. They're truly modern, because they are designed to make efficient, economical use of nonflammable, nonexplosive Trichlorethylene solvent. And you can get them for any capacity from 25 to 400 tons of soybeans processed per day.

Just think of the many advantages this new type of plant offers you. It's compact—needs very little space. You can locate anywhere . . . put up your plant right in the heart of a highly industrialized district. You don't have to put the plant in the great outdoors far way from where you do your business. You can keep your capital investment small because you don't need to make expensive provisions for grounding, safety barriers, fire fighting equipment and fire- and explosion-proof con-

struction. You can cut your fire hazards to the minimum, and that will keep down your insurance rates. And best of all, you can now carry on a highly efficient extraction operation using a nonflammable, nonexplosive solvent.

So, for your next solvent extraction installation, whether it's a replacement or a new unit, pick one of these modern plants. And pick Du Pont Trichlorethylene for your nonflammable solvent. You'll get a stable, rapid penetrating solvent which can be recovered readily and almost completely for reuse. It distills completely in a very narrow boiling range and leaves no high boiling residues in extracted material. Deliveries can be made promptly and quickly anywhere, in tank cars or drums.

Why not find out more about what these new plants and Du Pont Trichlorethylene can do for you? Just clip and mail the coupon below—

Tune in "Cavalcade of America" Tuesday nights—NBC coast to coast

DU PONT
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Please send me more information on Du Pont Trichlorethylene for Extraction.

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GROWERS

MIDSOUTH IS PROMOTING

Soybeans are on the march in the Midsouth this spring. The area's leaders are promoting them to replace some of the cotton acreage. And they are taking steps to help producers get started on a sound basis.

Greene County, Ark.

Yield contests for soybeans, corn and cotton in Greene County, Ark., have been announced by E. W. Sanders, county agent at Paragould.

Entries must be in by June 1. Producers can enter one or all three contests.

The soybean contest yields will be based on No. 2 soybeans, in a 5-acre field. A point system will be used: yield 75 points; cleanliness of combining 10; record keeping 15.

The contests are being sponsored by the Farm Bureau, grain buyers, ginnery, vocational agriculture teachers and the county extension service.

Orderly marketing and high quality soybeans are also the goals of the soybean marketing committee of Greene County Farm Bureau. The committee sponsored a series of meetings in the county during the week Apr. 7-14.

Paul C. Hughes, field service director for the American Soybean Association, spoke at all meetings. He said Greene County must market cleaner soybeans if it is to keep a market for its crop. He also pointed out the need for storing part of the crop.

The committee is making a survey to determine the types of storage needed for the 1950 crop, and



—Photo Progressive Farmer
Abe Robinson (left) and Leslie Hatchett, Mobile County, Ala., examine soybeans that are about ready to harvest.

will take steps to secure that storage.

Clay County, Ark.

A supplemental crop committee has been appointed in Clay County, Ark., to smooth the bumps that may be caused by a 100-percent increase in soybean production in the county in 1950. Acreage is expected to jump from 18,000 to 40,000 this year.

Goal of the committee is better quality soybeans for 1950. It has a four-point program:

1—Divide the crop between early and late maturity to extend the harvest time and reduce the rush to market.

2—Work for enough farm and commercial storage to handle 50 percent of the crop.

3—Hold a combining school to encourage cleaner combining.

4—Encourage soybean buyers to buy on grades as an inducement for production of quality soybeans.

Members of the committee are: Ralph Williams, Don Richardson,

County Agent Troy Jennings, Joe Nichols, Sr., Joe Nichols, Jr., and D. E. Robinson, all of Piggott; Houston Crowson, Rector; Bert Watson and Oran Nichols, Pollard.

MORE BEANS ALONG GULF

With Pensacola, Fla., as a center, draw a line almost due west to Mobile Bay and, with this as a radius, swing an arc across Baldwin and Escambia counties in Alabama and Escambia County in Florida. There you have most of the soybean area of the Gulf Coast and of Alabama and Florida, reports H. I. West, Baldwin County, Ala., in Progressive Farmer.

In 1949 this comprised some 45,000 acres in Baldwin, 10,000 acres in Escambia County, Ala., and 5,000 acres in Escambia County, Fla. There were also some 4,000 acres in Mobile and 800 in Washington counties in Alabama. Lesser acreages were found in Houston County in Alabama and across the Florida

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Bemis is also a major supplier of cotton, paper and waterproof laminated bags and bag-closing materials.

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Here's why Bemis is Burlap Bag G. H. Q.

- Largest Importer—You benefit from our large operations.
- Experience—Producers and users alike accept Bemis' grading of Indian burlap as the standard for the industry. You benefit from our knowledge of quality.
- Quality Bag Manufacturing—Just one example: Bemis close-stitch seams are as strong or stronger than the burlap itself.

- Bemis Band-Label Burlap Bag, with crisp, bright Bemis printing, set a new high in saleability for your product.

- Facilities—16 plants and 15 additional sales offices, strategically located, assure a dependable source of supply and prompt service.

Bemis





You have to watch moisture closely on the Gulf Coast. These soybeans are in storage at Riemer's Farms, Elberta, Ala.

line around Chipley and Marianna.

This all started about 10 years ago. Horace Kennedy, farmer and buyer in Baldwin County, found himself on the long end of 30,000 bushels of Otootan beans. Baldwin

County had long been a source of supply for this seed, but he began to see a waning market, so he took his problem to J. T. Murphy, manager of the Southern Cotton Oil Co., of Pensacola. The result of this teamwork was two carloads of oil beans planted the next year for oil. There was considerable opposition to the oil bean because "oil beans just would not grow near the coast."

Nevertheless, they did, and Kennedy said they got 65 cents a bushel that year. Then along came the war with its demand for oil. Acreage increased along with a corresponding increase in price. Soybeans rapidly took over as a second crop following Irish potatoes. This proved so profitable that last year nearly all of the land in lupine, Irish potatoes, oats, cabbage, watermelons, early corn and even early sweet potatoes was planted to beans. Acreage per farm varied from $\frac{1}{2}$ acre up to 400, with 40 to 80 acres about average. Yields ranged from 18 to 35 bushels an acre. With a net price of \$1.90 per bushel they brought a cash return of close to 3 million dollars.

Acreage in this area will increase for 1950. There are tremendous possibilities for soybeans all along

the southern tier of Alabama counties, the north Florida counties, the south Georgia counties, and even for other sections of Alabama and Georgia. Certainly they follow nicely after lupine seed and oats are harvested.

Varieties now used are principally Ogden and the tall-growing Clemson. This holds good for the whole Coastal area. Two new beans that are making much progress are the Dortsosy 2 and the Dortsosy 31. These are improved Ogdens that in some places yield better and stand up in the field longer without shattering.

As a second crop along the Gulf Coast soybeans have no equal and that is the way most growers use them—strictly as a second crop. They fill the gap after other crops are harvested. They will fit in with cotton, corn and peanuts—but as a 2- and 3-year rotation, getting three crops in 2 years.

CAN ABSORB MORE BEANS

"We can have a substantial increase in soybeans and still find a good demand for the production," says G. L. Jordan, University of Ill-

NO waste --- NO loss NO measuring

Inoculation of soybean seed becomes easy, sure and effective when you use this non-sticky humus base inoculant. It coats the seeds visibly, thoroughly and quickly—yet never gums the planting machine. And in addition, you gain both speed and economy as well.

LEGUME-AID



The famous inner lined carton package protects the potency of the nitrogen fixing bacteria and holds exactly enough inoculant to treat five bushels of soybeans. Order what you need. Open each package fresh as you treat each batch of seed. No waste, no loss, no measuring. No inoculant does more for soybeans than LEGUME AID. Tell your dealer you want it.



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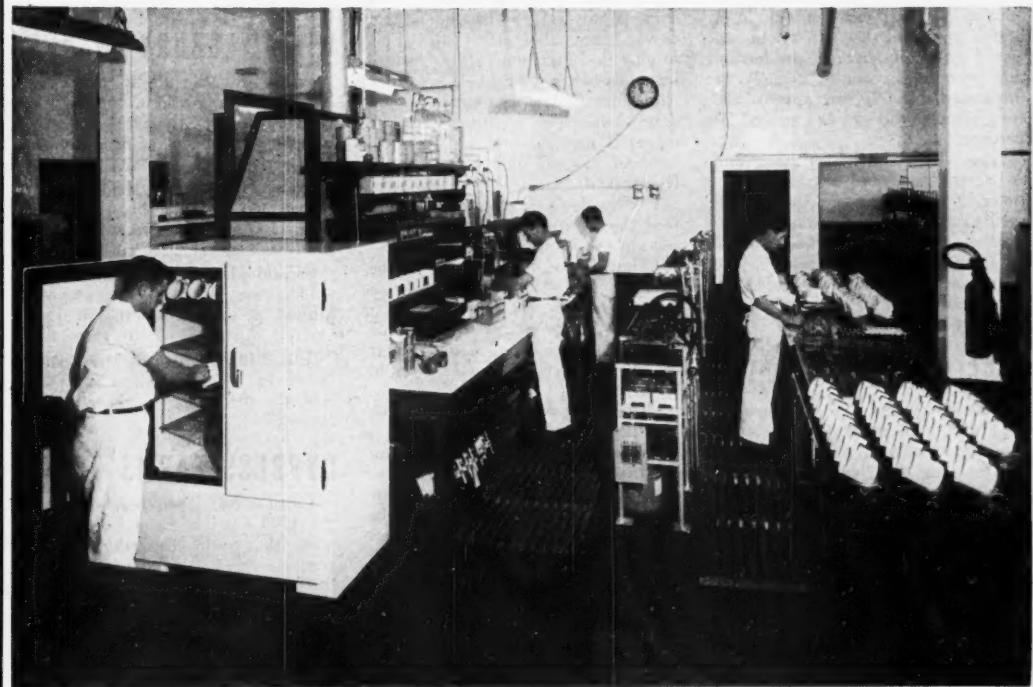
CONTRACTORS, specializing in grain elevators, soybean processing plants and grain storages.

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Bloomington, Ill.

Serving The Soybean Industry



The above is a view of our oil refining department at Memphis, Tenn., which has a capacity of 150 refinings daily. Our laboratories at Decatur, Ill., and Des Moines, Iowa, have the same type equipment for refining oils.

6

Chemical
Laboratories
to
serve you.

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SPECIALIZING IN SOYBEAN OILS — CAKE — MEALS — FEEDS

"Over ONE BILLION dollars worth of products analyzed since 1935."

Iinois economist. Jordan made this statement recently at a farm outlook meeting at Bloomington, Ill.

"The price of soybeans is not determined by the supply of soybean meal but by the supply of all the meals and oils from crops."

Jordan said he has changed his opinion on soybean outlook. At first it appeared the corn allotments would so boost soybean production that bean prices would certainly be threatened. But it now appears the corn acreage will not be reduced 20 percent.

Also, the reduction of flax and its linseed meal and oil, and reductions in cotton acreage and cottonseed meal and oil will cause shortages of those products unless there be some increase in soybeans. The peanut acreage is also scheduled for a big reduction, so the market will be short of peanut oil.

SUGGESTED THE TRIANGLE

Who first suggested the idea of the triangular package for margarine that narrowly escaped being written into the law of the land when the margarine bill passed last winter?

Newspaper columnist Drew Pearson gives the credit to a Hannibal,

Mo., soybean producer. His name is O. W. Chandler and he made the suggestion half-humorously on a radio program.

Quoting Pearson:

"O. W. Chandler, poet and farmer, of Hannibal, Mo., was a guest on a radio program starring two leading adversaries in the senate oleo fight—Arkansas' Bill Fulbright, the champion of the cotton belt and oleo, against Wisconsin's Alexander Wiley, champion of the dairy belt. The senators were going at it hammer and tongs on the issue of colored oleo when Chandler cracked:

"Why don't we forget color and feed the cows garlic and onions, so we can tell butter by the smell?"

"The roar of laughter melted the senators' ire. Then, the Missourian suggested:

"Why don't you boys do it this way—write into the bill that butter be cut in rectangles and oleo in triangles?"

"The next day this was written into the bill and it passed!"

Actually, Congressman William S. Hill of Colorado had been promoting the idea of packaging margarine in triangles for some months prior to the radio program mentioned by Pearson. This feature was in-

cluded in the version of HR 2023 as it was passed in the Senate but it was later removed by the conference committee.

Chandler operates a 620-acre farm on the Mississippi River bottoms near Hannibal and raises a considerable acreage of soybeans.

WIN PILLSBURY AWARDS

Winner of the Philip W. Pillsbury soybean award this year was Harold Haffner, Thornton, Ind., the company announces at Minneapolis.

Haffner's Lincoln variety, test weighing 59 pounds, had already earned top prize in his state. He farms 160 acres of corn, wheat, soybeans and clover, and raises cattle.

Second place winner was Bent T. Gildersleeve, Hudson, Ill., who exhibited a sample of the Wabash variety.

The Pillsbury awards were established in 1941 for wheat, but this was the first year soybeans were included.

CYPRESS FARMS TESTS

Cypress No. 1 was best yielder in the 1949 Cypress Land Farms, Jay-
eye, Mo., yield tests, the firm reports.

Sixteen different varieties were tried out on the test farm located on Highway 61 near New Madrid, Mo.

Yield of Cypress No. 1 was 42.88 bushels per acre. Patoka was second with a yield of 40.16 bushels. Tied for third was S-100, Lincoln and Wabash with averages of 34.71.

Other 1949 test yields on Cypress Land Farms: Dorchsoy 31 26.72; Brownsby 25; Ogden 32.84; Dorchsoy 2 32.19; Dorchsoy 7 26.38; Ralson 22.25; Gibson 31.31; Hawkeye 31.99; Rickard Korean 27.22; Adams 25.18; and Monroe 19.06.

LOAN PERIOD TO EXPIRE

Producers who have placed their soybeans under the government's soybean program are reminded that the period for redeeming loans expires at midnight, May 31.

After that the government takes possession of your beans at the loan price of \$2.11 plus storage and moisture allowances no matter what the market price may be.

A word to the wise is sufficient.

— s b d —

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If you have a solvents problem or want further information on the specifications and characteristics of ESSO Hexane—write or call our office nearest you. Our technicians will be glad to assist you.

BOOKS

NEW "HUNGER SIGNS"

When Hunger Signs in Crops was first published by the American Society of Agronomy and the National Fertilizer Association in 1941 it met a real need for a handbook on detecting nutrient deficiencies in soils as revealed by the plants themselves.

The book has been widely used by college professors, research and extension specialists, industrial chemists and agronomists, county agents and teachers of vocational agriculture as well as dirt farmers.

But advances in knowledge of the subject have been rapid, and an entirely new edition has been prepared to cover these advances. The second edition, somewhat larger than the first, contains much material not published before. It is edited by Norman J. Volk. Many of the contributors are the same as in the first edition.

The striking and accurate photos that actually portrayed the "hunger signs" in color in the first edition are also a feature of the second.

The chapter on plant-nutrient deficiency symptoms in legumes was written by Werner L. Nelson and Firman E. Bear. Reflecting the increased importance of the soybean crop somewhat more space is devoted to hunger signs in soybeans in the second edition.

Color pictures of soybeans show: nitrogen deficiency, potassium deficiency, manganese deficiency, growth response to phosphorus and iron chlorosis.

This is hardly a book that the farmer who wishes to be reasonably well informed can afford to be without.

HUNGER SIGNS IN CROPS, revised edition, 390 pages, \$4.50. National Fertilizer Association, 616 Investment Bldg., Washington 5, D. C. Or order through Soybean Digest, Hudson, Iowa.

WHAT'S NEW IN CROPS

Progress in agronomy has been fast-paced in recent years. If you want to bring yourself up-to-date in this field you will do well to read **Advances in Agronomy**, Vol. I of which has just been published by Academic Press, New York.

The editor is A. G. Norman, formerly of Iowa State College but now with U. S. Department of Agriculture at Frederick, Md. Dr. Norman is well known to Soybean Digest readers and to American Soybean Association convention attendants for his original work with soybean inoculation and his authoritative contributions in that field.

The articles in the book are all written by specialists, and cover subjects as far apart as plant growth in saline and alkali soils, fertilizers, weed control and fixation of soil phosphorus.

In no field have advances been more rapid than for soybeans. A lengthy section is appropriately devoted to them. This is ably handled by Martin G. Weiss, until recently of Iowa State College, but now in charge of soybean investigations for the Bureau of Plant Industry at Beltsville, Md. He does a thorough job of summarizing the latest information on soybeans from an agronomic standpoint.

Weiss dispels some of the hoary notions about soybeans promoting erosion and being "hard on the land."

The immense advance in the crop is shown by the fact that three pages are taken to list the varieties that have come into prominence during the 1933-1949 period!

Weiss rightly devotes considerable space to the U. S. Regional Soybean Laboratory and its "regional approach to soybean research." It is an approach that is paying off in many new outstanding varieties and in progress in the study of soybean diseases.

ADVANCES IN AGRONOMY, VOL. I, 440 pages, \$7.50, Academic Press, Inc., 125 E. 23rd St., New York, N. Y. Or order through Soybean Digest, Hudson, Iowa.

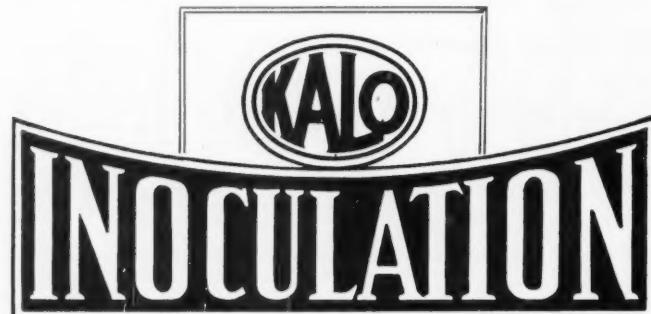
- s b d -

IN PRINTING PLATES

Alpha soya bean protein is being tested as a substitute for albumin in the production of printing plates, according to Graphic Arts Monthly. This material, when dissolved properly, mixed with ammonium bichromate, and adjusted to the right Baume and pH, produces a firmly adhering image on zinc or aluminum plates. The coating is at least twice as light sensitive as egg albumin as determined by the LTF Sensitivity Guide.

Aside from speed, the main advantage of alpha soya bean sensitizer is the fact that the material costs only about 20 cents a pound.

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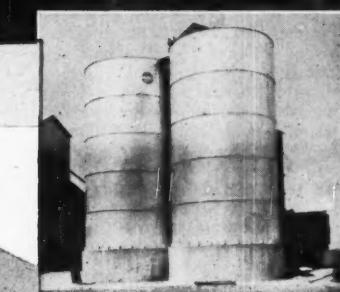
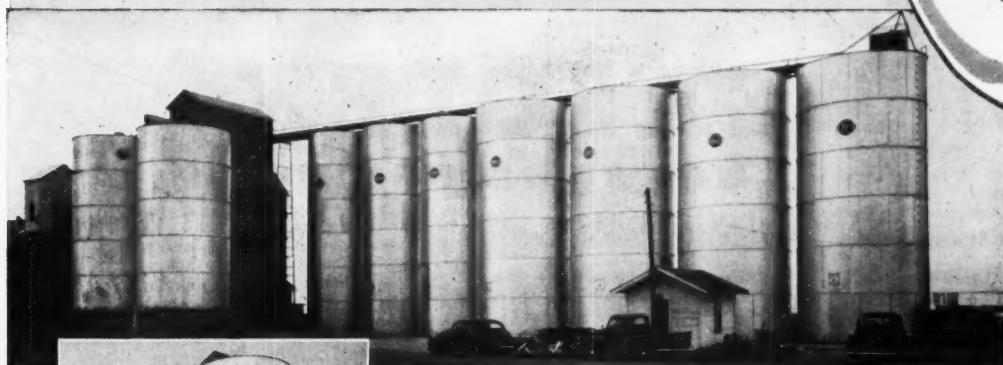
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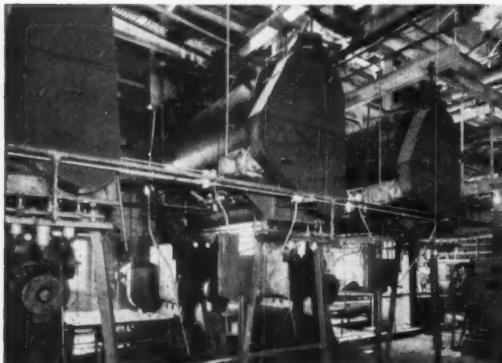
Only a few weeks ago we announced that the new Anderson Exsolex Process was doing a remarkable job in an oil mill in Arkansas. Since the announcement, we have been swamped with telephone calls, telegrams, and letters wanting complete details on this Exsolex operation.

We have tried to answer every inquiry. We have made arrangements for oil mill operators to see the Exsolex Process at Wilson, Arkansas. Every available Anderson Engineer is out on the road calling on those who have asked to have an Engineer call. If you have made inquiry and have not yet received the information you want or a call, please be patient. Your inquiry will be answered. We want everyone to know what the Anderson Exsolex Process is and can do.

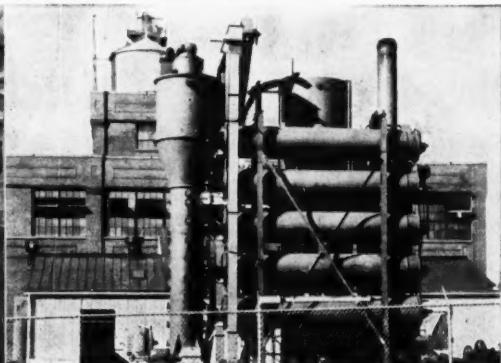
In the meantime, there is one point about Exsolex that we want to make clear. Frequently we are being asked, "Isn't the Exsolex Process the same pre-pressing operation that has been used for a number of years, particularly in other countries?" We answer this question by asking the questioner, "Have you ever heard of a pre-pressing process giving results on residual oil such as that obtained at Delta, Arkansas, that reduces solvent losses to less than half, that gives a meal practically gossypol-free similar in color to hydraulic meal, etc?" There is a difference—a vast difference between results on pre-pressing and with the Exsolex Process. We'll be glad to tell you about it.

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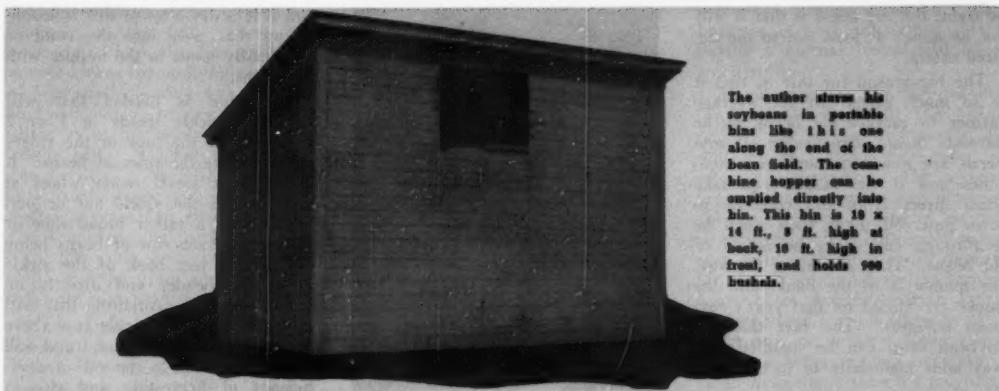
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SOYBEAN DIGEST



The author stores his soybeans in perishable bins like this one along the end of the bean field. The combine hopper can be emptied directly into bin. This bin is 10 x 14 ft., 8 ft. high at back, 10 ft. high in front, and holds 300 bushels.

Why I Grow Soybeans

By CARVER BROWN
Laddonia, Mo.

ONE THING is imperative for anybody to engage in any line of endeavor for a very long period of time. It must be profitable. So I offer you as my number one reason for growing soybeans—they are profitable. Ever since the soybean has become one of our major crops, it has been one of the surest and best paying crops. When we first began to get yields of 20 to 25 bushels per acre and the price per bushel passed 2 dollars, it became quite common for fields of beans to bring a greater return than the market value of the land on which they grew. Some times that happened on large acreages. That created quite a sensation. No other crop had ever performed like that before.

When we consider the fact that the per-acre expense of growing and harvesting soybeans is somewhat less than that of other cultivated crops, it becomes evident they have a right to be classed among the top profit crops. Profit in producing anything depends on keeping the cost of producing and marketing that commodity below the amount it can be sold for when ready for market. One of the most fascinating things about growing soybeans has been our ability to reduce the cost of production per bushel by producing more bushels per acre.

When soybeans first came to this part of the country, they were used almost entirely as hay for feeding livestock. A few were planted with corn and hogged down or pastured with sheep or lambs and enough were threshed to obtain seed to plant

the next crop. In those times, yields of 8 to 10 bushels per acre were considered good and more than that was unusual.

When it was discovered that so many different commodities of value could be made from soybeans, and processing plants began to be established over the country a concerted effort was set in motion to find ways and means to increase those yields. Soils specialists set out to determine the kind of soil soybeans liked and how to treat various types of soil to make them better adapted to this new crop. The field crops men conducted a lot of experiments to find out the cultural methods best for soybeans. Also date of planting, amount of seed to use per acre, etc.

Then the plant breeders began to, very patiently and persistently, create and test large numbers of crosses and strains in an effort to develop varieties that would be better adapted to our environment and purposes than the original ones brought from the Orient.

Men Who Contributed

There may be others who have contributed to the cause of increasing the yield of soybeans, but I think it is only fair to say that these three groups—the soils men, the crops men, and the men who have developed our improved varieties—have been almost entirely responsible for the constant rise in the number of bushels of beans we have been able to grow on each acre of ground.

Those original 8- and 10-bushel yields were doubled, then tripled, and in some cases, quadrupled and even more. The latest yield record is 61 bushels and no one expects that to be final.

This phenomenal increase in yield per acre has been a major factor in keeping down cost of production and thereby keeping up profits. On the other side of the profit margin is the price per bushel we get when we take our beans to market.

How Prices Kept Up

I am not so familiar with the forces that have operated to keep the market value of beans up as I am with those that have kept production costs down. But reading the Soybean Digest for a number of years has given me the impression that you men who process the beans and market the products you obtain from them, and the scientists and others who work with you and for you are taking care of your end of the industry in a very capable manner. And the fact that you have always paid the growers a price high enough to keep soybeans among the top profit crops gives substantial support to that impression.

I have one suggestion to offer you processors. It concerns storage space for beans. Soybeans are all harvested in a comparatively short time in the fall of the year. Practically the entire crop must be stored somewhere. Many informed people think a larger part of it should be stored on the farms. And they may

be right. But my guess is that it will not be done; at least not to the desired extent.

The big reason for this is, that it is so much easier for the average farmer to market his beans as he harvests them. Practically all soybeans are now harvested with combines and if the farmer can take them direct from the combine to town and sell them, then when he is through combining he is rid of the beans. They are out of the way, the money is in the bank, and the books are closed on that year's soybean business. The fact that the soybean crop can be handled that way adds materially to its popularity.

Then too, a large volume of soybeans is grown on land that is owned by one party and operated by another under a crop share agreement. When we used the grain binder and threshing machine method of harvesting, it was a simple matter to divide the beans as threshed for the machine was equipped with a weigher and any given number of bushels could be run into one wagon or truck for the landlord and a corresponding number of bushels into another for the tenant. But with combining, there is no convenient way to divide the beans so these partnership beans are taken direct to market and the division is made of the money received for them.

Whenever the total amount of soybeans produced becomes much greater than the off-the-farm storage facilities, some additional farm storage must be provided, and there will also be some shifting from soybeans to other crops. So it is my opinion that it will be to your interest to consider increasing your storage capacity as the total volume of production increases.

Is Only Manpower

Another reason I grow soybeans is that they can be produced with less labor than crops with which they compete. I am the manpower on a 320-acre farm so anything that offers a prospect of saving labor gets my special attention.

In producing a field of soybeans, I plow it with a 3-bottom 14-inch plow. I disk it with a 10-foot tandem disk. I harrow it with a 24-foot harrow. I plant it with a grain drill that plants 4 rows at a time, 35 inches apart. I cultivate once with a rotary hoe and one to three times with a tractor cultivator. I harvest the beans with a combine and store them in portable bins that are placed at convenient locations along the end of the field so the com-



CARVER BROWN—This article is from a talk given at the soybean processors conference at Columbia, Mo.

bine hopper can be emptied directly into them.

On my combine the clutch for the unloading auger is operated from the tractor seat by two small ropes so that the only thing in this entire procedure that requires the operator to leave the tractor seat is putting seed beans into the hopper of the drill when planting and it requires only 3 hours to produce and harvest an acre of beans. For 40 acres, it takes 120 hours or 12 ten hour days or 30 days for 100 acres.

You will notice what an important part farm tractors and implements play in soybean production. I want to give full credit to everyone connected with the farm implement business for making available to us all these implements, machines and equipment that are so efficient, dependable, convenient, easily operated, durable, and even good looking. It is common knowledge they have played a major role in advancing American agriculture to the high position it occupies today. Volumes could be written or spoken complimentary to our modern farm implements and the men who have developed them. But one reason we have such things is the fact we do not accept anything as being so good it can not be further improved. So I want to suggest what seems to me to be a chance to make one of these machines—a combine—still a little better for the soybean grower.

When a combine is driven faster than about 2 miles per hour, the header that carries the sickle has a tendency to weave up and down. When it is up, it cuts above some of the lower beans and when it is down, it is in the ground. If the ground is wet, it balls up the sickle

and if it is dry a lot of dirt is scooped up that goes into the combine and finally lands in the hopper with the beans.

Something is needed that will hold that sickle steady at 1 or 2 inches above the tops of the ridges on which are the rows of beans. It might be a small caster wheel at each end of the sickle bar or perhaps better a rather broad shoe or runner for each row of beans being cut, placed just back of the sickle under the header and directly on top of the row. Anything that will positively hold the sickle just above the ground at any rate of travel will add appreciably to the rate and efficiency of harvesting and also to the peace of mind of the operator.

Straw Spreader

The other part of the combine that needs revamping for harvesting soybeans is the straw spreader. Our soils and crops men insist almost demand, that we plant a winter cover crop on our soybean fields as soon as the beans are harvested. Combines as now equipped, leave soybean straw or stems in all sorts of tangled masses so unevenly distributed that it is impossible to prepare the kind of seed bed we like to sow fall grain in. It is the nature of soybean stems to hang together so they are discharged from the combine in clumps instead of an even flow as small grain straw is.

We need a straw spreader with the strength and capacity to shred or tear apart these clumps and distribute them sufficiently for a disk harrow to cut through them, instead of rolling over them. Another possible approach to the problem would be to install some sort of mechanism within the combine that would cause the stems to come to the straw spreader more evenly. Then the spreader we now have would not need to be changed so much.

Another reason for growing soybeans is that they fit well into a cropping system that lends itself to a soil conserving or soil improvement program. I do not think any farmer is making the most of his occupation or living up to his obligation to society unless the farm he operates is increasing in productivity from year to year.

The standard formula for increasing soil productivity is lime, legumes, and livestock, plus the needed minerals. The most practical way to start most legumes is to sow the seed in late winter or early spring on a small grain crop that has been sown in the fall. By using soybeans as the cultivated crop in the rota-

tion, the small grain that follows can be sown in the fall. These fall sown grain crops also furnish a convenient means for applying the needed minerals by sowing with them the kind and amount of commercial fertilizer to fit the needs of that particular soil. A good rotation for this locality is soybeans, followed by a small grain crop in which is seeded a grass and clover mixture. The beans can be used as a cash crop, the grain as a cash or feed crop; and the grass and clover for hay, seed and pasture.

Since soybeans are a legume, this rotation provides for a legume on every field every year. Then, if the crop residues are properly handled and the necessary minerals generously supplied, productivity will gradually increase and the rate of increase will be greater than if any other cultivated crop replaced soybeans.

Stand Adversity

Another thing I like about soybeans as a crop is their hardiness, their ability to produce in spite of adverse conditions. They will thrive on poorer ground and with less rainfall and also withstand more excess moisture than any other comparable crops. Chinch bugs and corn borers pass them by and plant diseases do not injure them to any great extent. If weather conditions or anything else causes them to be planted long after their normal planting date, they will shorten their growing period and mature sufficiently before killing frost to make a marketable crop.

If the farmer will plant them in a well prepared seed bed that has been appropriately fertilized, and give them proper cultivation, the weather can do its worst, along with all the other adversities that have yet been invented, and soybeans will come through with a surprisingly good yield.

A model farm enterprise would be one that was so organized and operated that the various commodities that farm produced for sale would move to market with the same regularity and smoothness that automobiles, refrigerators, etc., roll off the assembly lines of our great industrial plants. Including soybeans in the cropping system will help any farmer toward such a goal because of that ruggedness and dependability just mentioned.

One reason I started growing soybeans in the beginning was due to that inherent trait we Americans have for being willing to try some-

thing new. If a pioneer can make satisfactory progress in his new venture, it becomes a thrilling experience. The production of soybeans has made sensational progress since it began to gather momentum a few years ago, and I have enjoyed my part in it immensely.

One reason that I continue to grow beans is habit or custom. My farm is naturally adapted to soybean production. I have gradually accumulated about all the implements and equipment needed for growing and harvesting the crop. I have gone through the procedure so many times, it can be done now with little effort. There is a convenient and dependable market for all the beans I can produce. The business is paying, and there is no reason for quitting or changing.

I assume you processors are in a

somewhat similar situation. Your business is well established. It is paying a normal return and all is going well.

All of us would like to think this favorable situation will last indefinitely. But nothing is constant, except change. And a false sense of security is dangerous. The soybean industry has naturally and unavoidably encroached on some of the older industries. It is reasonable to expect new competition will develop for us. It might be well to remind ourselves of that basic truth Emerson expressed so well when he said, "If a man can write a better essay, preach a better sermon or make a better mouse trap than his neighbor, he may build his house in the woods, and the world will make a beaten path to his door." This idea is just

(Continued on page 38)

Loading Soybeans for Europe



- Photos courtesy Seed Trade News

In the top picture you see a fleet of more than 75 trucks filled with soybeans waiting to be unloaded at Claybank, Va. Beans were bought by Louis Groh, a large handler of beans who does a big export business through the port of Baltimore. Below is boat at wharf being loaded with Groh's soybeans at Claybank. Boat came up from Baltimore, a principal port for the export of beans.

SOY PROTEIN In Poultry Diets

By H. R. BIRD

Bureau of Animal Industry, U. S. Department of Agriculture, Beltsville, Md.

—Soybean Digest photo by Kent Pellett



THE IMPORTANCE of soybean oil meal to the poultry industry may be indicated by stating:

1.—That our total supplies of protein in the United States are inadequate for most efficient feeding of our livestock.

2.—That soybean oil meal is the only major protein supplement which has increased in supply during recent years.

3.—That soybean oil meal is the most abundant of the protein supplements suitable for poultry feeding.

Less than 10 years ago, anyone who discussed the use of soybean oil meal in poultry feeds attempted to answer the following question: "To what extent can animal protein supplements be replaced by soybean oil meal?" The answer to this question was usually conservative. It was generally agreed that animal protein supplements were indispensable.

Now our viewpoint is so different that we don't even ask the same question. Now we ask: "What quantity of animal byproducts is needed to supplement diets composed largely of grains and soybean oil meal?" We may even ask: "Are animal byproducts required at all?"

To come to the point quickly, we can answer the last question by saying, "No, they are not required. IF—"

Most of the rest of this report will deal with the "ifs." In the case of diets for growing birds on range or for hens producing eggs for market only, the "ifs" are minor ones and it is quite easy to devise diets composed largely of grains and soybean oil meal with no animal protein supplements.

The situation is quite different for starting diets, broiler diets, and diets for breeders. Here the "ifs" are important. Soybean oil meal

"Animal products are no longer required in poultry feeding —IF". From Dr. Bird's talk before soybean processor meeting at Columbus, Ohio

serves very well as the major source of protein when supplemented with small quantities of animal byproducts. The latter can be omitted successfully from experimental diets, but it is not yet recommended that they be omitted from commercial starter, broiler, or breeder diets.

Very good diets for growing chickens and turkeys on range can be formulated without animal protein supplement if the birds have been fed good starting diets containing some animal protein during the first 8 weeks of life, if soybean oil meal is the major source of protein in the growing diet, and if the growing diet contains the recommended allowances of known nutrients. Likewise, diets that support egg production at a satisfactory level can be devised without animal protein supplements if soybean oil meal is the major source of protein and if the diet contains the recommended allowances of known nutrients.

No attempt will be made to give diet formulas here, but growing mashes and laying mashes containing no animal protein supplements are described in USDA Circular No. 788 as well as in the publications of state experiment stations.

Good starting diets for chicks can be formulated without animal protein supplements if they contain the recommended allowances of known nutrients, if soybean oil meal is the principal source of protein, and if they contain adequate quantities of vitamin B₁₂ and one or more other vitamins still unknown. The vitamin B₁₂ and other unknown vitamins are furnished in commercial mashes, in part by animal protein supplements and in part by special concentrates derived from fermentation.

Recent results obtained with vitamin B₁₂ constitute an important step forward in our knowledge of the utilization of soybean oil meal. We have known for some time that replacement of animal protein supplement with soybean oil meal made

it necessary to add other sources of calcium, phosphorus, and riboflavin. Even when these additions were made, there was still a difference in growth response in favor of the animal products. The addition of B_{12} to the diet containing soybean oil meal closes the gap, completely in some cases but not quite completely in others.

There are still some unknown factors that are not always adequately supplied by diets composed largely of soybean oil meal and grains. Additional work will be required to characterize these factors and map their occurrence in feeds.

Good, Poor Meals

Not only does soybean oil meal lack vitamin B_{12} , but increasing the level of soybean oil meal increases B_{12} requirement. Growth is depressed if soybean oil meal is added to a B_{12} deficient diet, but this depression can be overcome by adding the vitamin. This effect is believed to be due to the protein of soybean oil meal, and in fact it has been duplicated with purified casein.

It has been stated above that vitamin B_{12} goes a long way toward eliminating the difference between soybean oil meal and animal protein supplements. It also eliminates minor differences in quality among soybean meals, but it will not make a very poor meal into a good one. Although the vitamin produces a growth response when added to an unheated meal, the response is less than that obtained when B_{12} is added to a properly heated meal.

Much remains to be learned about the relation of vitamin B_{12} to the utilization of the amino acids of soybean oil meal. The sulfur-containing amino acids of unheated soybean oil meal are not well utilized. Even when the meal is properly heated to permit maximum utilization the quantity of sulfur-containing amino acids is not quite adequate. If methionine is added as 0.1 to 0.2 percent of the diet without adding B_{12} , a definite growth response is obtained. If B_{12} is added without methionine, a slightly greater response is obtained. If B_{12} is added with 0.1 percent methionine, the growth response is greater by a small but consistent margin than the response obtained with B_{12} alone.

If soybean oil meal is overheated, it becomes deficient in lysine. We do not know whether or not vitamin B_{12} can correct a slight deficiency of lysine induced by overheating.

The vitamin does not correct the deficiency of lysine which exists naturally in cottonseed meals.

The available information indicates that while vitamin B_{12} supplementation probably eliminates minor differences in quality of soybean oil meal due to processing, the vitamin produces best results when used with high quality meals. This means that careful processing is as important as ever.

A search of the literature does not reveal conclusive information as to the ideal conditions of processing soybean oil meal. Undoubtedly, many processors have determined these conditions to their own satisfaction. There is evidence that good meals can be produced by heating at temperatures from 100° to about 130° Centigrade, but that great care must be exercised to regulate time of heating at the higher temperatures in order to avoid overheating.

Good breeder diets can be devised without animal protein supplements if soybean oil meal is the major source of protein, if the recommended allowances of known nutrients are provided, and if vitamin B_{12} and one or more unknown factors are provided.

Hatchability

The results of experiments at Beltsville indicate that the most important unknown factor required

for hatchability under the conditions of these experiments is the same as that required for growth, namely, B_{12} . Injection of pure vitamin B_{12} into eggs laid by deficient hens counteracted in large part the effect of the dietary deficiency on reproduction.

Hatchability of eggs and growth of chicks are not the only responses to deficiency or sufficiency of vitamin B_{12} . If the hen's diet is deficient, many of the chicks that hatch from her eggs appear to be entirely normal at hatching time but die during the first 10 days of life regardless of the diet they receive. Many of those that survive feather poorly and grow slowly. Correcting the deficiency in the hens' diet or injecting B_{12} into the eggs reduces chick mortality and improves feathering and growth as well as increasing hatchability.

There is no evidence that hatchability is affected by variation in the amino acid content of soybean meals fed to laying hens.

Although much remains to be learned about the use of soybean oil meal in poultry diets, the information now at hand would probably permit a considerable increase in its use for this purpose if greater supplies were available. We may reasonably anticipate that future research will determine in greater detail the virtues and limitations of soybean oil meal and thus increase its value as a feed ingredient.

Car of Meal for CROP Shipment



—Photo courtesy Kentucky Farm Bureau News

In the background above you see a carload of soybean oil meal—the first carload shipment from western Kentucky of foodstuffs under the recent Christian Rural Overseas Program. Destination was Stuttgart, Germany. The Ohio Valley Soybean Cooperative, Henderson, Ky., donated one bag of meal for every one of the 22 tons bought through donations. Commemorating the occasion is Rev. Bert Williams, campaign chairman for Henderson County CROP Committee, speaking. With him on the platform are representatives of CROP and of the Associated Women of the Kentucky Farm Bureau.

SUGGEST 3 PCT SOY IN GERMAN BREAD

Inclusion of 3 percent soy flour in German bread is the most ready means of raising the protein level of the German diet. This was the recommendation of R. G. Brierley, vice chairman of the executive board, and C. K. Shuman, nutritional director of the Soya Food Research Council, on their recent return from Germany.

Brierley and Shuman went to

Germany on invitation of the German Ministry to investigate ways to incorporate soy protein in the German diet. They traveled over most of Western Germany during a 4-week period and conferred with over 300 key food leaders.

Their recommendations closely paralleled recommendations of J. L. Carter, U. S. Regional Soybean Laboratory, and Geo. M. Strayer, American Soybean Association, following their trip for ECA last fall. Brierley and Shuman concluded

that at least 50 percent of the German people are short of protein and that including 3 percent soy flour or milk powder in their bread would be the easiest way to increase their protein intake without changing their food habits.

They recommended that a new standard flour be developed in which 3 percent of soy flour and/or milk powder would be a standard ingredient; and that if necessary the German flour standards be revised to allow such a change.

"Since the consumption of cereal products in the form of bread is extremely high in much of the populations of Western Germany, it would appear evident that 3 percent soy flour incorporated into bread can make a significant nutritional contribution to bread in terms of both qualitative and quantitative protein requirements, and thereby contribute to overcoming any national protein shortage," these men state.

"While we have recommended a concentration on bread, this does not preclude the use of soy protein in sausage and in various specialty foods. The program should be started in bread, however, and let the other uses which require more legislation and education, follow along naturally."

— s b d —

ENRICH MEXICAN DIET

The Public Health Ministry and the National Nutrition Institute of Mexico City has approved plans to enrich the Mexican poor man's bread, tortillas, with soy flour, according to Chicago Journal of Commerce.

The two organizations point out that the soybean and its flour are widely accepted protein sources but though the soybean has proved itself adaptable to cultivation in Mexico it has not been well received in this country.

Tortillas are made of a corn meal washed in lime water which, incidentally, adds considerable calcium to the resulting unleavened bread.

But the National Nutrition Institute insists the national diet is sadly lacking in proteins. Following the example set by other countries, the institute proposes to enrich tortillas with soy flour to improve the diet, particularly of the lower classes. Tortillas, however, are not only consumed by poor people. A great number of wealthier Mexicans eat tortillas.



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Domestic and Foreign Outlets For Soybeans and Soy Products

By L. J. NORTON*

I BELIEVE that your industry may be approaching a time when major decisions will have to be made. Dr. A. B. Paul, in a thesis which he prepared at the University of Illinois on "The Development of the Oilseeds Industries in the United States," pointed out that the soybean industry grew more rapidly than any other industry in the economic history of this country that had come to his attention.

But it is not the nature of any industry to grow rapidly for an indefinite period. Sooner or later they have always leveled off. Limits to growth may be set by raw materials, markets or other factors. The soybean industry has benefited from a rather remarkable combination of circumstances.

The Cornbelt was looking for an additional adapted cash crop. The industry found a ready outlet for meal in the rising mixed feed industry based on the increased use of protein indicated as desirable by the work of animal nutrition scientists. It also found a growing vegetable shortening industry and later an expanding margarine market which was attempting to fill the gap caused by the wartime decline in butter production.

The soybean industry also benefited at one stage from the decline in cotton, corn and wheat acreages in the original AAA program of the early 1930's and later from the cutting off of imports of coconut and other tropical oils during the war. After the war it found a world basically short of food fats and oils. Now on the raw material side it is to gain from our insane corn reduction program made necessary by the unrealistic corn-price-support program which Congress has forced on the Cornbelt.

But does the industry have the markets to absorb a great increase in output? Let us consider a few factors.

1—A smaller cotton acreage in

1950 very likely means less cottonseed oil and meal. This will create gaps which soybean products can fill. But someday the Cotton Belt may decide to quit the program of economic suicide involved in pricing itself out of an increasing sector of its market and go back to using its resources to grow cotton. Seed, cottonseed oil and meal are strict by-products and will be produced in accordance with the total output of cotton.

2—in spite of the elimination of the excise tax on colored margarine, a step of which I approve, I question whether the optimistic dreams of great increase in sales of margarine are well founded. People prefer butter to margarine and will pay a substantial premium to get it when they can. What I saw in Europe last summer confirms this view. People eat margarine either because butter is not available or is too expensive.

* Professor of Agricultural Economics, University of Illinois, Urbana. The part of this talk dealing with foreign prospects is based on observations made by the speaker in Europe in July-January, 1950 on an assignment from the Office of Foreign Agricultural Relations, United States Department of Agriculture. Given at Soybean Processors Conference at Columbus, Ohio.

L. J. NORTON



The increase in margarine consumption in the United States since 1940 reflected the decline in butter production caused by a more rapid increase in fluid milk consumption than in production. With milk consumption tending to level off or decline in many markets and milk production rising, more and more milk will be pushed back into butter manufacture. Sooner or later we will be forced to let this butter sell for what it will bring in the market and the price will not have to decline much to induce consumption of our rather small surplus. Imports of butter will also increase moderately when we eliminate import restrictions as we must in order to bring our practice concerning trade into line with our preaching.

3—The packing industry has improved lard in recent years and this commodity will be more competitive with vegetable shortening than it was in the period when consumption of vegetable shortenings rose rapidly. After all, lard is a strict by-product.

4—The actual farm requirements of protein feeds may be more nearly filled than many people assume. I know of little or no definite evidence on this point. We have recently assigned one of our young staff members to attempt to get an answer to this question. There is, of course, a practically unlimited market for protein feed sold on an energy basis but it would have to be priced in competition with corn. This may sound like nonsense to men in an industry who have seen such a rapid expansion in recent years.

Protein Balance?

But, if I had capital in a soybean plant, one question to which I would get an answer is: How close are we to a practical balance in protein requirements under actual farm conditions? Hay and pasture provide a lot of proteins and will furnish more in the future. The heavy protein feeding areas of northern

Europe all insist that they overfed protein before the war when it apparently was comparatively cheap. All are scaling down requirements for protein and also have active programs to make increased use of domestically produced grass and pasture. The grass drying industry in England is getting to be a sizeable one.

5—Soy flour is apparently an excellent source of protein for human nutrition but experience indicates that the growth in its use can best be described as an Italian answered my question as to the probable growth of the margarine industry in his country: "Lentement," which I translated to mean gradual.

6—I know nothing about industrial technical uses for soybean oil. But with a realistic price on linseed oil and a huge stock of it in the country, I would hazard a guess that the incentive to use soybean oil for drying purposes is not quite so strong as it was when government programs created an artificial price premium on linseed oil.

7—I am not as optimistic on exports of soybeans and soybean products as some people appear to be. I think they will be fairly large

until larger supplies of substitute products become available in non-dollar areas but there are rather distinct limits to possible sales. I was in Europe from July 1949 to January 1950 and spent about half of this time on an assignment for the Office of Foreign Agricultural Relations of the United States Department of Agriculture to look into factors involved in the markets there for United States fats and oil seeds.

Western Europe has an interest in the United States soybeans and soybean products for the following reasons:

a—The oilseeds crushing industries are looking for increased volume. But this means little because in many countries the allowed margins are high and so the processors are in a weak competitive position as compared to United States processors. These countries simply do not have enough dollars to buy United States oilseeds to keep their oilseeds industry more completely employed.

b—The north European margarine industry needs a fairly definite amount of liquid oil to go with a hard oil (coconut for example) and whale oil which goes into their mar-

garine formulas. Supplies of liquid oils are comparatively short in non-dollar areas because of the decline in shipments of Indian peanuts and peanut oil and Manchurian soybeans as compared to prewar years. This has created a gap and to fill it rather definite quantities of United States liquid oils, soybean or peanut, have been purchased. Some reliance is placed on domestic rapeseed even though it is expensive. There is no substantial industry in Europe which compares to our vegetable shortening industry.

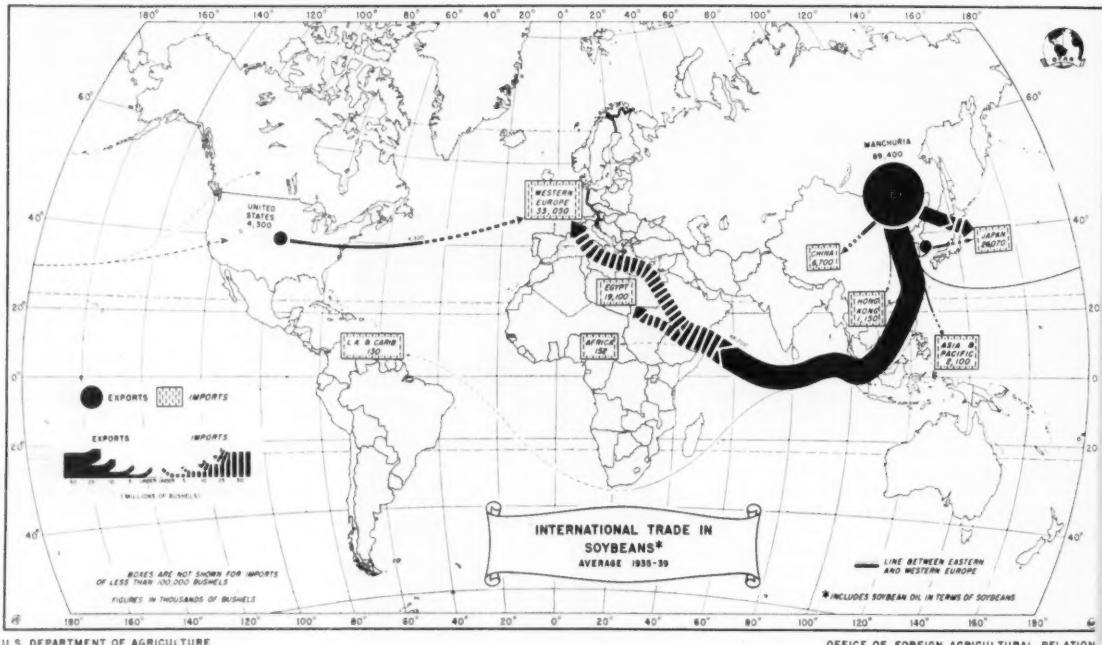
c—South Europe uses butter, lard and vegetable oils of the salad oil type. When olive oil is short in Italy and peanut oil in France, substitutes are sought. Soybean oil in Italy would compete as "seed oil" with low-grade olive oil.

d—North Europe, in particular, would like added protein feed in order to continue the expansion of livestock production—the most fundamental drive in European agriculture.

e—Some soy flour will be used for human food but European food habits are even more conservative than ours. Most European people have been fed up with "erstaz" foods

Practically all the soybeans in world trade during 1935-39 came from Manchuria, which exported about 90 million bushels. The U. S. was the second largest exporter of soybeans, with annual shipments of 4.3 million bushels going mainly to western Europe. Korea also exported

a small amount. Manchurian exports went mainly to western Europe, Japan, Egypt and China. Soybeans and soybean oil are expressed in terms of bushels of beans.



U. S. DEPARTMENT OF AGRICULTURE

OFFICE OF FOREIGN AGRICULTURAL RELATION

in the periods of regulation and scarcity from which they are happily emerging. Any substitute for the "honest" traditional foods will be difficult to promote, regardless of its nutritional merits.

These are some of the specific uses Europe has for soybean products. Each is strictly limited. Basically our exports to Europe depend on the dollar exchange problem and the priorities which European governments and people will assign to the various products for which their scarce dollar exchange may be used.

Dollars Are Short

Europe's dollar resources are short in relation to their needs and desires for goods in the various dollar markets. Among these are cotton, tobacco, bread grains, feed grains. There are also strong demands for other raw materials, notably petroleum and petroleum products, and machinery for the very extensive capital investment programs now going on, not only in the home countries but in all of the raw material producing areas affiliated in one way or another with various European countries. Australia and the Belgian Congo for examples. The Marshall Plan has

provided large sums to partially satisfy those needs and desires. But the total of these funds will certainly be reduced from year to year.

Europe has considerable dollar earning ability particularly from tourists, other services and indirect trade with the dollar areas, but it is hard for me to see how the more than \$4 plus billion of aid in 1949-50 will be made by 1952-53 when Marshall Plan aid is scheduled to end. So Europe is now selective in her dollar purchases and will become increasingly so. European countries buy in non-dollar areas whenever they can even though nominal prices may be higher than in the U.S.A. The most conspicuous case is the United Kingdom, formerly our largest customer for agricultural products. Denmark, a buyer of soybeans and oilseed products, is largely an economic prisoner of the sterling area because there her markets are and must follow the British line.

The final revisions of the procurement programs in the U.S.A. of the ECA countries for 1949-50 called for about the same quantities of bread grains as in the previous year, substantially more feed grains, slightly less oilseeds, not

much over half as much other fats and oils, somewhat more oil cake and meal. These are not firm figures but are constantly subject to revision as new conditions develop. One of the best informed oilseeds men on the continent called them "wish figures." Incidentally the biggest prospective buyer of oil cake and meal in the list prefers cottonseed to soybean oil meal for both price and technical reasons.

As to quality there were many complaints about the soybeans shipped under the contracts based on U. S. standards. It is fairly obvious that after the U. S. processors pick up the better soybeans, the junk which accumulates in elevators and goes to fill overseas contracts on government grades may be pretty inferior stuff. Also there were universal complaints that U. S. crude soybean oil was dirty.

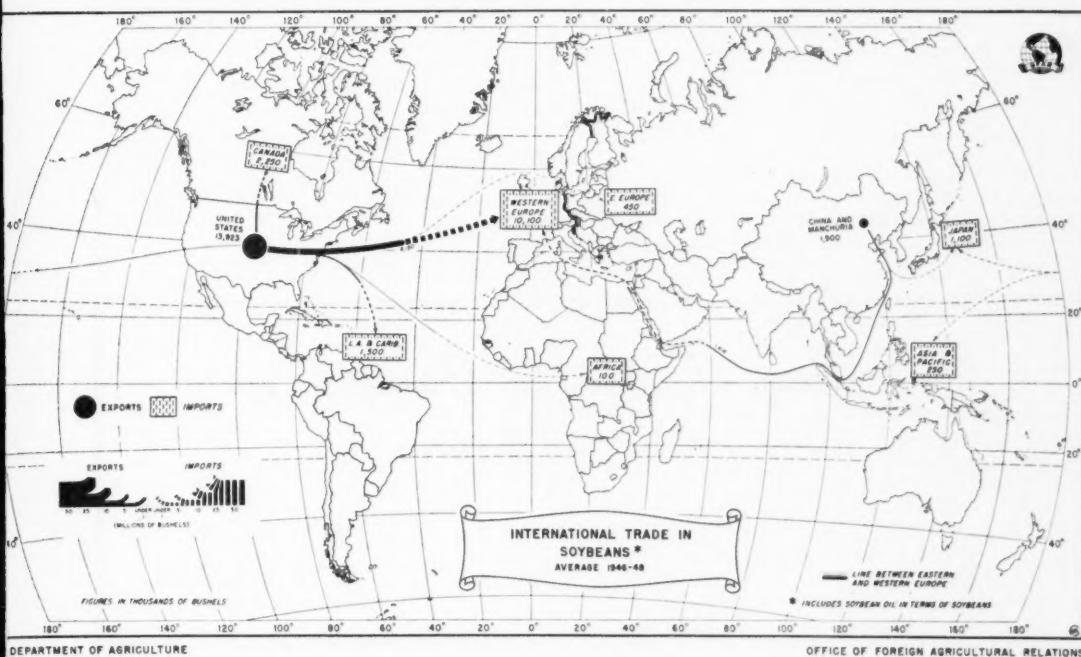
The following developments since last July may be noted:

1—A good olive crop in the Mediterranean reduces the needs of Southern Europe for seed oils.

2—World vegetable oil crops in 1949-50 seem to be up and down: for example peanuts up in India and down in Africa; but in general the trend is upward.

The annual volume of soybeans entering international trade during 1946-48 decreased to a mere trickle. In the Far East, a very small amount of soybeans were available for export because of the effect of World War II on production and the heavy demand at home. Exports

of soybeans from Manchuria dropped from 90 million bushels in pre-war years to about 2 million bushels in 1946-48. But U. S. soybean production and exports increased rapidly during this period.



3—Expansion in output of butter and slaughter fats in Europe in 1949 and a good rapeseed crop have made local supplies of fats larger.

4—Even though rationing has been suspended in all countries of Western Europe except the United Kingdom and in Denmark on butter, high prices and low consumer income tend to hold down effective demands for fats.

5—Apparently some sources of supply have been opening up which were previously not available.

6—Devaluation of currencies makes our products more expensive and intensifies pressure to seek supplies in sterling and other non-dollar areas.

7—Efforts to utilize more home-grown protein feeds are being intensified.

8—There is a slowing up in increase in livestock expansion in certain areas. This will operate on both sides; reduce feed demand but also slow up increase in local supplies of butter and particularly of slaughter fats.

Most of these developments are on the side of reduced imports from the U. S. as compared to ideas prevalent as recent as early last summer.

On the other side is the growing determination of Western Germany to raise the level of fat consumption—still well below the prewar level. This has been increasingly manifest since the new government came into office late last spring. It involves both vegetable oils and animal fats. It has not only meant large purchases in the U.S.A. but it has created competition in world markets and raised sterling prices on certain oils. Developments in Ceylon coconut oil are a case in point. This may force or lead certain other countries to make greater use of dollar fats and oils. But it is an

open question whether Germany has the exchange resources to carry out her ambitious plans in this connection.

Conclusions

On balance I conclude that we will have considerably larger than prewar exports of soybeans and soybean products from the 1949 crop less than from the 1948 crop. If supplies of liquid oils from non-dollar areas become available, the needs for our soybean oil will become less urgent. China must have Western goods and north China and Manchurian oil seeds could come back onto Western markets faster than many people anticipate.

The U. S. soybean industry will be in a healthier condition if it has a foreign outlet for a portion of its output than if it does not. In the long run the retention of such markets will be largely influenced by the success of our national efforts in increasing the size of the dollar trading area. If we succeed in including Europe in such an area, then our exports will be based on comparative costs here and in foreign areas. Our efficient producing industries will gain. I would classify the soybean industry in this category. This will require convertible currencies and an end to the system of discriminatory bilateral trade and exchange controls which now hamstring world trade. To go into detail on these is beyond the scope of this talk, but I have a feeling that we are closer to convertibility than many people think. After all it is easier for the pound sterling to be convertible at \$2.80 than at \$4.03.

A question of the most fundamental character to all industries which need export outlets and have a price structure which makes them competitive is: Will the U. S. act like a creditor nation or will it not?

We have been much more realistic about this since World War II than we were after World War I. We are still in the process of scaling down our tariffs rather than jacking them up as we did after World War I. Perhaps this is because we have not found it necessary to subject our economy to the harsh process of inflation as we did in the earlier period. Regardless of the reasons we have been more realistic on behaving like a creditor nation. The soybean industry if it wants exports had better be right on this fundamental question.

I have been discussing these matters from what many of you think, I suspect, is a rather hard-boiled point of view. But the world needs more food. It will be better fed if it is in a position to draw on the food producing resources of North America including our great soybean industry than if it is not. From the standpoint of better nutrition with all that this can mean to more productive, healthier, and happier people and to maintenance of peace, this matter is of the highest importance. It does not need to be solved on a give-away basis, either. It had best be solved on a return to the old efficient basis of multilateral, nondiscriminatory trade with convertible currencies. But it cannot if we do not have the elementary sense to behave like a creditor nation must in such a world.

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Flax Crop Down

World flaxseed production for 1949 is estimated at 138.4 million bushels, about 8 percent less than last year's harvest, according to the latest information available to the Office of Foreign Agricultural Relations.

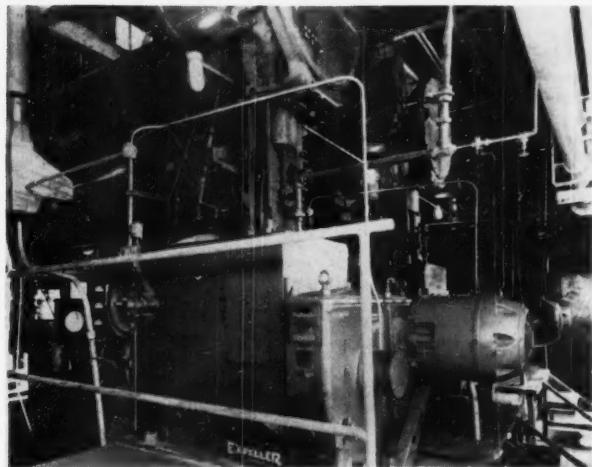
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The Exsolex Process on Cottonseed



A battery of Anderson Pre-Expellers (motor end view) at the Delta Products Co.

● The results obtained in the extraction of cottonseed by the new Exsolex process are of interest to our readers. The V. D. Anderson Co., originator of the process, reports it will be suitable for a wide variety of oleaginous materials and may be, in time, adapted to soybean processing. Also, many soybean processors process cottonseed.—Editor.

The Delta Products Co., Wilson, Ark., known in the cottonseed industry as a pioneer in the development of new oil mill technology, in January of this year added one more to its long list of "firsts" by being the pioneer in this country in the use of the Anderson Exsolex process for the extraction of cottonseed oil.

The Exsolex process is an integral operation that consists essentially of reducing the oil in the cottonseed meats in a special high capacity Pre-Expeller to a degree that permits the rolling of highly extractable flakes from the prepress cake followed by the solvent extraction of the remaining oil in the prepared flakes. This Exsolex process, although a comparatively simple commercial operation, does require certain technical knowledge on the control of several factors within certain limits.

By N. HUNT MOORE

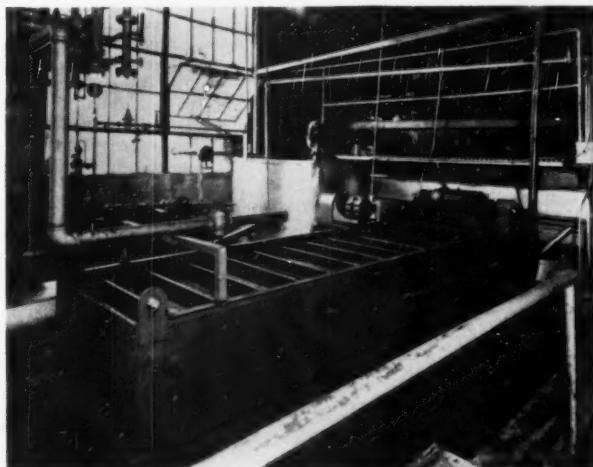
Delta Products Co., Wilson, Ark.

following advantages would have to be obtained: (a) Lower residual oil; (b) better quantity oil; (c) better quality meal; (d) the elimination of fines in the miscella; (e) a decrease in solvent losses; (f) a reduction in the overall processing costs.

In order to illustrate the advantages of the Exsolex process, our present results may be compared to the previous results with solvent extraction of cottonseed meats. With the Exsolex process, the residual oil in the meal coming from the solvent removal dryers has averaged 0.3 percent as compared with an average of 2.6 percent for this season with direct solvent extraction. This has increased the yield of oil 18 pounds per ton of seed processed when compared to their previous direct solvent extraction process and results in a total of 375 pounds of oil per ton of cottonseed.

The oil produced from the Pre-Expellers and the solvent plant is of excellent quality. The crude oil has the refining characteristics of hydraulic press oil and has a very light color. This crude oil refines to a light color and has excellent bleaching qualities. The refinery at Delta Products Co. finds this oil excellent for the manufacture of

Anderson screening tanks at the V. D. Anderson Co.



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In the previous solvent operation, the miscella from the extraction column was passed through a continuous horizontal centrifuge to remove the bulk of the fines from the miscella before the final filtration. The flakes produced from the treated Pre-Expeller cake, however, are durable and do not disintegrate into fines during the extraction process. This characteristic has eliminated the need for the continuous horizontal centrifuge and has, in addition, increased the length of the filter cycle from a few hours to a few days. This increase in the filter cycles has made it possible to operate the solvent plant with a minimum amount of labor and has also contributed very largely to a great saving in solvent, filter aid, filter cloths, and gaskets.

The meal produced by the Exsolex process is of a color similar to that of hydraulic meal and has been found to be almost gossypol-free. This may open the way for larger uses of cottonseed meal in the feeding of swine, baby chicks, and calves.

Reduce Losses

Solvent losses with the Exsolex process were reduced more than half of the amount for the former solvent operation. There are several factors that contribute to this substantial saving in solvent.

First, the elimination of the continuous horizontal centrifuge cut the air load through the vent system to a minimum.

The second factor was the increase in the length of filter cycles. By prepressing, the length of filter cycles has increased from six to ten times. Every time a filter is evacuated, opened, and cleaned, some solvent is lost.

The third factor that has effected a solvent saving is the lighter load imposed upon the distillation and solvent recovery capacity. This saving in solvent will mean a substantial financial gain and also a reduction in the hazards inherent with high solvent losses.

There are a number of factors that have entered into the overall reduction in the processing costs by using the Anderson Exsolex process. The saving in steam is very pronounced. With direct solvent extraction, at a rate of 200 tons of cottonseed a day, it was necessary to pump as much as 60 g.p.m. of solvent into the extractor. This means that all of that solvent must be heated from an average temperature of

80°F to its boiling point and then vaporized. These solvent vapors must also be condensed with water. With Exsolex and at the same mill rate, however, only 20 gallons per minute of solvent to the extractor have been used. This has cut the steam and water consumption to about one-third of that formerly used.

The amount of sparge steam used in the stripping column has been cut to less than half of that needed with straight extraction. The steam to the steam jet ejector on the dryer condenser is turned completely off most of the time since the use of the centrifuge has been discontinued. Under the present costs of steam and electrical power in our location, this saving in steam more than offsets the additional power needed for the Pre-Expellers.

We have experienced a saving of 20 h.p. in our cooling water pumps, 35 h.p. in the elimination of the centrifuge, and 10 h.p. in the pumping of solvent and miscella. At our present mill rate, with the operation of two Pre-Expellers, we have added about 280 h.p. from which can be subtracted the 65 h.p. saving in the solvent plant.

It has been possible to rearrange the manpower formerly used for solvent extraction in such a way as to operate the equipment without the hiring of any additional labor. At the same time, capacity of the plant was increased.

Summarizing, Delta Products Co. has, by installing the Anderson Exsolex process with Pre-Expellers ahead of its present 200-ton-per-day solvent extraction plant for cottonseed, reduced its residual oil to 0.3 percent, reduced its solvent losses to less than half, eliminated the need for a horizontal continuous centrifuge, cut its steam and water consumption to a third, and has produced a better quality oil and meal. Although the new Exsolex process has been in operation for only a short time, the advantages of the operation are apparent.

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MISBRANDED

Miles A. Nelson, state marketing and enforcement chief, Lansing, Mich., has charged that many soda fountains and restaurants are selling "whipped cream" that is actually made from soybeans.

State food investigators found a product described as whipped cream that they suspected was made from soybeans, in a dairy store in Lansing.



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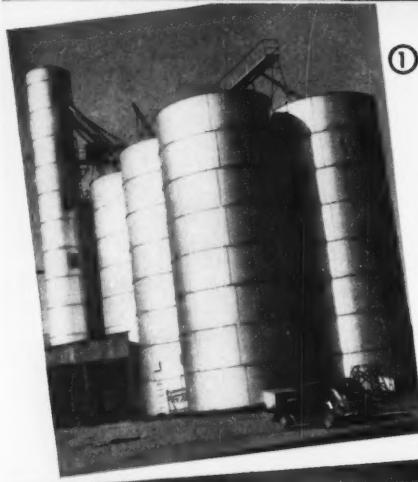
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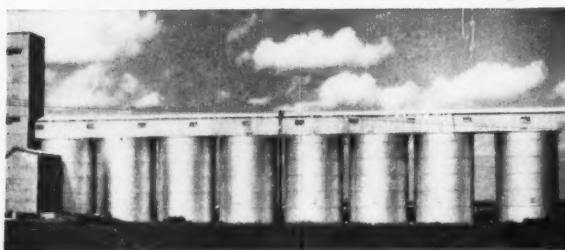
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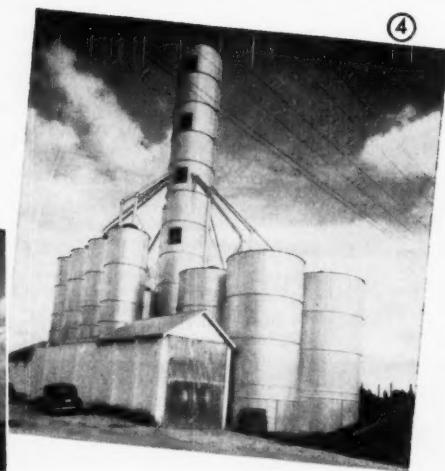
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3. Oklahoma	240,000 Bu.	7. Texas	325,000 Bu.
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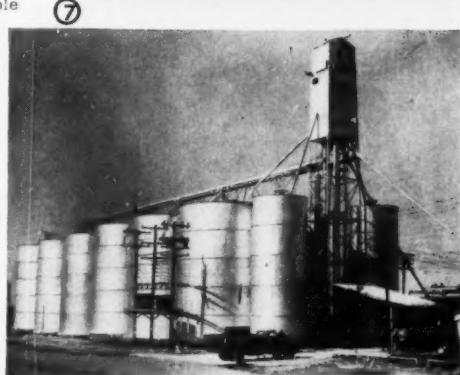
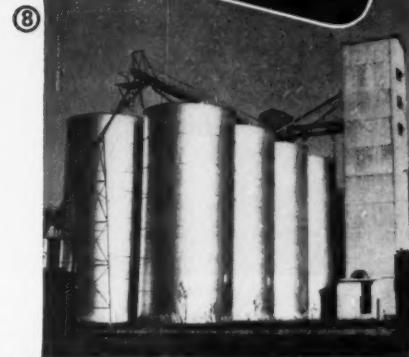
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—Photo courtesy Bloomington Pantagraph

The Illinois governor, Adlai Stevenson, cuts the ribbon to put into operation the new 4-million-dollar solvent processing plant of Ralston Purina Co. at Bloomington, Ill. Looking on, left to right: Bloomington Mayor Cecil Cone, Nat Morey, manager of the Bloomington plant; and Donald Danforth, president of the company.

Open New Purina Plant at Bloomington, Ill.

More than 600 feeders, dealers and others interested in agriculture attended dedication ceremonies for the new Ralston Purina Co. solvent extraction plant at Bloomington, Ill., Apr. 12.

Governor of Illinois Adlai Stevenson cut the ribbon that officially placed the mill in operation and congratulated the city of Bloomington on securing the huge modern plant that "represents an important expansion of an old and honorable company."

Others taking part in the ceremonies were Donald Danforth, Purina president; Cecil R. Cone, mayor of Bloomington; Nat Morey, manager of the new plant; and E. H. Hamel, sales manager for Purina's Grainbelt-Western region.

The plant has an annual capacity of $2\frac{1}{2}$ million bushels of soybeans. Storage facilities of the elevators total 2 million bushels. Unloading and transfer capacity is approximately 15,000 bushels an hour.

APF NOT COMPLETE SWINE SUPPLEMENT

Many natural farm feeds supply enough APF to weanling pigs in dry lot, S. W. Terrill, Illinois College of Agriculture swine specialist told visitors at the college Swine Growers' Day Apr. 7.

Among the natural feeds that supply enough APF are meat scraps, tankage, meat and bone scraps, fish meal, condensed fish solubles, dried skim milk and other dairy by-products, said Terrill. Sufficient amounts are also supplied by commercially manufactured APF supplements.

A ration of corn-soybean oil meal supplemented only with commercial APF is *not* complete, said Terrill, nor as good as earlier farm news items would seem to indicate. It contains no mineral additions and may be low in fat-soluble vitamins and water-soluble vitamins except for the B_{12} and unidentified factors supplied in APF, he pointed out.

Solvent Meal

Screw press and solvent soybean oil meals were compared by J. L. Krider at the Swine Growers' Day. Solvent soybean oil meal was consumed in greater amounts daily and produced faster gains than screw press meal when each was self-fed free-choice to pigs with shelled yellow corn and minerals on alfalfa pasture in experiments at the college, he said.

When solvent soybean oil meal was fed as the only source of supplementary protein in drylot rations for weanling pigs, it produced significantly faster average daily gains than screw press meal, without affecting the efficiency of the gains, in another experiment.

The results show that solvent soybean oil meal fed either free-choice or in mixed rations is palatable and produces rapid and efficient gains, said Krider.

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SOME FEEDERS IN HORSE, BUGGY DAYS

Pork producers of the United States are told that they are losing money by following nutritional practices comparable to the "horse and buggy days."

They were urged by Dr. H. J. Prebluda, animal nutrition specialist of U. S. Industrial Chemicals, Inc., in a speech before the 15th annual conference of the National Farm Chemurgic Council, Washington, D. C., to fortify their "home grown" grains with sufficient vitamins that affect food efficiency to realize faster gains and a greater margin of profit.

Dr. Prebluda referred specifically to the feed supplement known as Animal Protein Factor—or APF—and vitamin B₁₂ developments, which he said had saved poultry raisers in the U. S. \$10,000,000 in feed bills in the past six months.

"There is a surprisingly large percentage of pork producers who have been accustomed to a spring and fall crop of runty pigs," Dr. Prebluda said. "Such offspring gain slowly and because of an inadequate feeding program account for a decreased margin of profit.

"It has been the practice on the part of some raisers to blame the lack of thriftiness of the animals on some mysterious 'X' disease or bug when in reality it is due to nothing more than poor nutritional practice in not fortifying the local grains with sufficient vitamins, especially APF since it affects feed efficiency."

— s b d —

HIGH PROTEIN FEED

Production of a new scientifically processed high protein concentrate feed ingredient made from soybeans was announced by the A. E. Staley Manufacturing Co., Decatur, Ill. The new concentrate, with a minimum protein content of 50 percent, is a granular, bright golden-colored meal, which has been carefully heat-treated, the Staley company said.

It is being marketed as 50 percent protein "Hi-Pro-Con."

While not a source of animal protein factor, or APF, the new feed ingredient is a source of vitamin B. Each pound contains 1.5 milligrams of riboflavin, 17.5 of niacin, 6 of pantothenic acid and 1,300 of choline. In addition to the 50 percent protein, an analysis of Hi-Pro-Con shows 0.5 percent minimum fat, 26 percent minimum NFE, a maximum of 3 percent fiber and a maximum of 7 percent ash.

"This is an ideal 'mixing feed' for those who want to get the most out of synthetic APF," Herschel T. Morris, head of the Staley feed department, said.

— s b d —

DIET BALANCER

Delmor nutrient powder, a palatable protein-carbohydrate concentrate with essential minerals, vitamins, and whole liver substance, has been announced by Sharp & Dohme, Inc., New York City.

Delmor is designed for the treatment of protein deficiency due to an inadequate intake of essential minerals and vitamins. Proteins includ-

ed in Delmor—casein, lactalbumin, and soybean—provide the amino acids considered essential for maintenance of positive nitrogen balance and normal tissue growth.

Since protein deficiency is seldom an uncomplicated phenomenon and is accompanied frequently by vitamin deficiency, supplementary amounts of essential minerals and vitamins have been included in Delmor. Minerals and vitamins included are calcium, phosphorus, iron, thiamine hydrochloride, riboflavin, pyridoxine hydrochloride, calcium pantothenate, niacinamide, ascorbic acid, vitamin A, and vitamin D.

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Will Be More Beans Planted in All Areas

Most reporters on the soybean crop for the Soybean Digest are inclined to go along with the Mar. 1 forecast of the U. S. Department of Agriculture—which placed probable harvested acreage for 1950 at about 17 percent above last year.

Practically all observers expect a larger total acreage in their respective areas this year—though guesses vary from a small increase to as much as 50 percent.

Allotments on other crops will boost soybean acreage in almost all areas. A factor that may push up soybean acreage more than earlier expected is a generally late planting season. Some land intended for oats, cotton and other crops will go to soybeans. Extensive winter killing of wheat and in some cases legumes will mean more soybean acreage.

The upsurge in the soybean market during April has also increased interest in soybeans.

On the other hand, farmers in some areas are becoming more conservation conscious and may cut cultivated acreages. There is some tendency to ignore corn acreage allotments, especially in cash grain areas, which also could mean fewer beans.

Soil moisture varies from too much to too little. But the spring has been late and cold in most sections.

Apparently there is plenty of good seed of adapted varieties most places. Tests in general show good germination.

The trend to newer, adapted varieties continues.

Canadian farmers are being encouraged by the Canadian Barley and Oilseeds Conference to grow more oilseeds, including soybeans, in 1950.

Reports of Soybean Digest correspondents follow:

Arkansas

Jake Hartz Jr., Jacob Hartz Seed Co., Stuttgart, for southeast, south central (Apr. 24): Probable 1950 acreage 120% of 1949. Allotments on other crops will increase soybean acreage. Lot of land planted to Kober lespedeza. Damage to oats by insects will increase soybeans. Believe seed available for local use. Dealers holding seed for local farmers but could have sold long ago for cotton areas. Seed germinating 75-80%. May be less hay type beans. Weather dry. Need rain badly.

Florida

E. N. Stephens, county agent, Pensacola, for Escambia County and northwest Florida (Apr. 24): 20% increase in acreage as compared with 1949. Diversion from cotton caused about half of increase. One of greatest factors in causing increase is possibility of soybean allotments or quotas in 1951, and desire of farmers to build up large base history acreage. I expect good seed of adapted varieties to be short. Weather conditions good.

Illinois

J. E. Johnson, Champaign, for Champaign and adjoining counties (Apr. 24): Probable increase of 10% over 1949, but less than Mar. 1 forecast. Wheat going out, very unfavorable oats situation, loss of clover and alfalfa seedings from 1949. Many farms facing an emergency planting where soybeans fit in to best advantage. Corn allotment may have some small bearing. Farmers not taking this very seri-

ously. Some indication that public is getting tired of political trial and error method that is so costly. Plenty of seed. All reports of germination favorable. Season at least 3 weeks behind normal. First oats seeding in March barely through the ground. Cold weather with beating rains after early oats seeding looks discouraging. Trend to slightly earlier varieties seems to prevail. Hawkeyes did well last year, largely due to small fields, higher fertility and better attention rather than any miracle features for this variety.

W. L. Burlison, head department of agronomy, University of Illinois, Urbana (Apr. 25): 1950 acreage increase about 20%. Reduction of corn will affect soybean acreage. A lot of winterkilling of legumes as well as wheat. This likely to affect soybean acreage upward. We may have a seed shortage as we near seeding time. Germination very good this year. Weather conditions wet. Farm work considerably delayed. More Wabash for southern Illinois and more Hawkeye for central and northern.

Walter W. McLaughlin, Decatur, for Decatur (Apr. 22): Probable acreage 120% of 1949, due to corn acreage going to beans. Plenty of good seed. Germination good. Weather cold. More Hawkeye acreage this year.

Russell S. Davis, Clayton, for west central (Apr. 24): Considerable more soybean acreage this year than last. Much of corn acreage will go into soybeans. Wheat crop has winterkilled worst in years. Some of this may go to beans. Late spring season has kept any of this from

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being filled in with oats. Wet weather prevented any field work until Apr. 17.

Gilbert F. Smith, Mahomet, for east central (Apr. 24): Believe corn allotments will increase soybean plantings about 10%, about as many acres as average farm in this area can stand. Some wheat being plowed up, some of which will go into beans. Remainder will be put in corn. Much dissatisfaction with corn allotments in this cash grain area. Believe seed stocks ample. Many foresaw the corn cut. Seed germinating 90-95%. Have had a very mild wet winter. Will be week more before any work in fields.

Robert W. Weitzer, Valley Farms, Inc., Carrollton, for west central (Apr. 26): Probable acreage 150% of 1949. Corn decreases, also wheat, will go to beans. Winter killing of wheat will greatly increase bean acreage. Late spring will cause a lot of oat ground to go to beans. Also the firmness in November beans indicates a good price. Good seed almost impossible to get now. Soil preparation proceeding right along. Hawkeye, Wabash, Lincoln, Monroe, Cypress No. 1, Korean, the varieties here this year.

Indiana

Peter J. Lux, State P.M.A., Indianapolis (Apr. 24): State acreage increase 8-10%. If other crops go out will increase soybean acreage, but soybean seed entirely too high priced. Germination very good, better than in last 5 years.

Ersel Walley, Walley Agricultural Service, Fort Wayne, for northeast Indiana and northwest Ohio (Apr. 24): Increase in acreage 10%, half due to corn acreage allotment, half to late season discouraging sowing of intended oats acreage. Plenty of good seed, germination satisfactory. Weather cool and wet. Rainfall for

1950 to date about twice normal. A few more Hawkeyes this year. 10% increase significant in this territory where soybean acreage has been high percentagewise for several years.

K. E. Beeson, extension agronomist, Purdue University (Apr. 25): At least 10% increase in soybean acreage. Both wheat and corn allotments will tend to increase soybean acreage. Severe winterkilling of alfalfa, drowning of wheat especially in a few sections of southwestern Indiana, delays in sowing oats due to very wet April, also favorable price of soys, are all factors that may increase soybean acreage slightly more than the 10% estimated Mar. 1. Supply of certified Hawkeyes abundant; supply of certified Wabash and Lincoln limited. Seed germination excellent. Wabash will be used on much of acreage formerly devoted to Gibson and Patoka. Hawkeye will replace some Lincoln acreage due to very satisfactory results and early combining in 1949.

Iowa

Leslie M. Carl, U. S. Department of Agriculture, Des Moines (Apr. 21): Increase of beans about 20%. Plenty of good seed of adapted varieties. Weather too dry. Moisture seriously needed with higher temperatures.

Howard L. Roach, Plainfield, for northeast (Apr. 22): Probable acreage increase 10%. Very little effect of corn allotments on soybean acreage. Winterkill and wet weather will increase acreage further. Seed germinating 90-95%. Weather conditions too dry. Subsoil short of moisture. More Hawkeyes, less Richmond here in 1950.

Robert R. Kalton, farm crops subsection, Iowa Agricultural Experiment Station, Ames (Apr. 21):

The advertisement for Friedman Bag Co. features a large circular logo at the top with the company name "Friedman BAG CO." and the text "SINCE 1869". Below the logo are several bags of different types: a large bag labeled "BAGS for SOYBEANS AND PRODUCTS", a bag labeled "PRINTED BAGS for individuality", a bag labeled "Used BURLAP AND COTTON BAGS", and a bag labeled "TWINE". There is also a small bag labeled "WE BUY SURPLUS BAGS". To the right of these bags is a circular phone number "Phone DALY 8-4114". At the bottom, the company address is listed: "FREDMAN BAG CO. 330 E.CLYBOURN ST. MILWAUKEE 2,WIS."

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Probable 1950 soybean acreage for state as whole 140-150% of 1949. Delayed oat seeding in many areas will probably result in more soybean acres. Seed shows good germination. Moisture very deficient in several areas. Freezing weather has delayed land preparation in northern Iowa. Will be some decrease in Lincoln, big increase in Hawkeye, small acreage to Adams.

Kansas

H. L. Collins, agricultural statistician, Topeka (Apr. 26): Probable acreage 120% of 1949. Reduction in corn and wheat largely accounts for sharp increase intended for soybeans. Spring has been cool and dry and is generally about 2 weeks later than usual.

E. A. Cleavenger, extension division Kansas State College, Manhattan, for eastern (Apr. 24): Probable acreage 120% of 1949. Loss of oats and wheat acreage from insects and dry weather will leave acreage for soybeans. Seed germinating good. Weather conditions poor. S-100 acreage will be greatly increased. Wabash will be planted some.

Michigan

Farm crops department, Michigan State College, East Lansing (Apr. 24): 1950 acreage 115% of 1949. Weather, present soybean prices

will affect acreage. Fair amounts of seed as 1949 crop was of good quality. Seed germination excellent. Weather backward for small grain planting. Late spring, frost out late, rain. Very little change in varieties from Mandarin, Earlyana, Hawkeye, Manchu.

Minnesota

John W. Evans, Montevideo, for southwest (Apr. 24): Probable 1950 acreage 133 1/3% of 1949, but less than Mar. 1 forecast. Hinges on corn allotment compliance which as of now may not be more than 50%—but corn compliance may go higher by May 15. Seed germinating 80-90%. Plenty of moisture. Spring backward, retarding grain planting.

R. E. Hodgson, Waseca, for southeast (Apr. 25): Increase in soybean acreage 15%. Flax not popular here. Much of corn reduction going to beans. Snow Apr. 25 and little field work done will make small grain planting unusually late. That will encourage bean increase. Plenty of good seed if hunted up. Considerable variation in seed germination. Needs watching. We need moisture but wish grain was in ground. Many Monroe being tried, some Hawkeye and even Lincoln.

Missouri

O. H. Acom, Wardell, for southeast (Apr. 22): 10 to 15% increase

in acreage as compared with 1949. Cotton acreage cut will be partly used in beans, corn and alfalfa. Plenty of seed. Germination good. Weather conditions good.

J. Ross Fleetwood, extension specialist field crops, University of Missouri, Columbia (Apr. 25): 20% increase in acreage, due to both corn and cotton allotments, to a lesser extent to wheat. Wheat has been seriously damaged in some areas and part of abandoned acreage will go to soybeans. Seed germinating okay. Weather dry and cold but seedbed preparation far advanced. Increase in Wabash only major change in varieties.

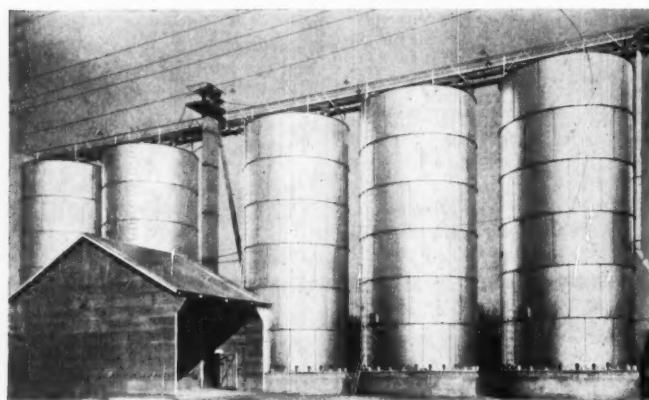
Harry A. Plattner, Malta Bend, for central (Apr. 24): Soybean acreage up 15%. Acreage allotment of corn cut 20%. Beans will get possibly 10 to 15%. Soybeans will get 5 to 6% of wheat going out of production. Recleaned, certified seed germinating 80-85%. Shortage of rain. Will be plenty of time for seedbed preparation.

John E. Brown, Cypress Land Farms Co., Jaywye, for New Madrid County (Apr. 25): Acreage increase 15%. More corn being planted than in 1949 to build corn base. Cotton allotment cause of moderate increase in soybeans. Lot of small grain drowned out. Almost all seed available. Germination down 15-20% from 1949. Varieties to be planted mostly Ogden with S-100 for early maturity. Increase in Wabash. Ralsons out.

E. M. Poirot, Golden City, for southwest (Apr. 22): Probable acreage same as 1949. Weather very dry. Need rain. Perhaps a few more S-100 will be planted.

Paul C. Hughes, field service director, American Soybean Association, for Scott, Mississippi and New Madrid Counties (Apr. 24): Acreage increase 10-15%, slightly above national average. Cotton allotments playing large part increase. Though this area has corn program it is being overlooked and corn acreage will also increase 10-15%. Off to late spring but plenty of farming last week. Unless weather takes turn for worse present intent to plant should hold true. Supply of good seed for local trade limited. Germination low. More Wabash this year.

A. F. Stephens, Gulf, Mobile & Ohio Railroad Co., St. Louis for northeast Missouri and Illinois (Apr. 25): Acreage 20% above 1949, 5%



Pictured above is the elevator at Allen-Davis, Matthews, Mo., consisting of 5-steel bolted tanks 21 feet in diameter by 48 feet high, with a capacity of 14,100 bushels each.

The installation complete with tanks, elevating and conveying equipment was furnished by Dabney-Alcott Supply Co., Memphis, Tenn. . . . and is one of the numerous installations supplied by them for handling of soybeans and other grains.

Elevators and storage layouts can be supplied for local requirements.

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above Mar. 1 forecast. Corn allotments will increase bean acreage. Some oat acreage will be diverted because of wet weather. Weather cool, late. Wabash will increase in central Missouri.

Nebraska

Fremont Cake & Meal Co., Fremont, for eastern (Apr. 26): Probable 1950 acreage 125% of 1949. Cut in corn has increased bean acreage and cold, late spring may cause further increase due to poor oats prospects. Seed germinating good. Weather cold and dry. Large increase in Hawkeyes.

North Carolina

Frank Parker, agricultural statistician for North Carolina, Raleigh (Apr. 24): Allotments on other crops should encourage increase in soybeans. Seed testing laboratory reports heavy number of samples sent in. Germination better than usual. Weather favorable for spring soil preparation but too early for much planting.

North Dakota

C. J. Heltemes, Fargo (Apr. 24): Probable acreage 150% of 1949. Season about 2 weeks late in soybean area. Field work has not started and much more delay could cause a further increase in acreage.

Ohio

G. G. McIlroy, Irwin for west central (Apr. 22): Acreage 10% more than 1949. Some ground ordinarily planted to corn will be changed to soybeans if the farmer is going along with corn reduction program. Some acreage originally intended for oats will be changed to soybeans due to lateness of oat planting weather. Farmers are becoming more conservation conscious and will not plant as many cultivated crops as they have been. This situation may hold down increase

in soy acreage more than we think. Weather cold and wet up to date. However, oat seeding is about completed. Many early planted oats have not come up. Some have been replanted. More Hawkeyes, fewer Lincolns and other varieties this year.

D. G. Wing, Mechanicsburg, for west central (Apr. 25): Probable acreage 110% of 1949. Those going into corn control will put in more beans. Late season and bad weather for oats will increase soybean acreage. More Hawkeyes this year.

Pennsylvania

E. L. Gasteiger, agricultural statistician, Harrisburg (Apr. 24): 1950 acreage 110% of 1949. Need moisture and warm weather.

South Carolina

H. A. Woodle, leader agronomy extension work, Clemson: Probable 1950 acreage 125% of 1949. Cotton acreage allotment will increase acreage of soybeans. Weather conditions dry. Trend to Roanoke variety.

West Virginia

R. J. Friant, extension agronomist, Morgantown (Apr. 22): Probable acreage same as 1949. Weather cold, below normal. Delayed soil preparation because wet and cold.

Wisconsin

Geo. M. Briggs, extension agronomist, Madison (Apr. 24): Probable acreage 120% of 1949. Some increase due to corn allotments, but mostly due to increased price, also less sweet corn in some areas. Winterkilling may affect soybean acreage for hay. Monroe being offered for certification, so 1951 will have general acreage of this variety.

John P. Dries, Saukville, for eastern (Apr. 25): Some increase in

acreage. Some winterkilled hay fields will go to beans. Weather very wet. No grain crops or beans planted. Early maturity varieties preferred here because of late spring.

Ontario

R. H. Peck, River Canard, Ontario, Canada for southwestern Ontario (Apr. 22): Probable acreage 120% of 1949. Late, cold spring has prevented any land preparation to date and for a few days yet. Late spring may cause some oat acreage to be planted to soybeans. Farmers are very enthusiastic about soybeans this year, although some are wondering about the price for the 1950 crop. Seed in short supply but enough to go around. Germination good.

- * b d -

OLEO PLANT IN MEXICO

One of the largest food processing plants in Mexico was inaugurated in Mexico City recently by Anderson, Clayton & Co., leading cotton firm in the country, Chicago Journal of Commerce reports.

The 20-million-peso plant, built in the industrial city of Monterey in northern Mexico, will produce margarine—an entirely new product to be manufactured in Mexico—vegetable lard, cooking and salad oil, mayonnaise, salad dressing and peanut butter.

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SOY IN RUSSIA

Russians have developed soy food substitutes for flour, cheese and kefir (fermented milk), according to Time Magazine.

These products are plugged frequently in Russian newspaper ads, along with *kabul*, a soya sauce for meats. Quoting the ads: "Soya cheeselets, available sweet with currants to commercial enterprises. Cost four times less than animal-produced cheeses."

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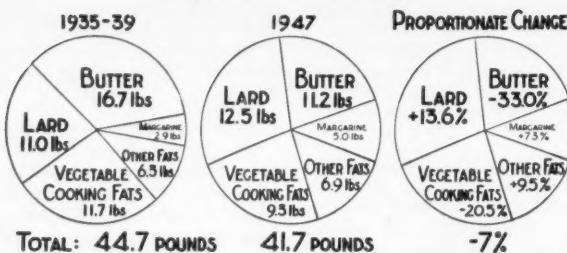
San Francisco

Buffalo

Los Angeles

Seattle

Changes in Fat Consumption



Source: United States Department of Agriculture
Total fat excludes the moisture content included in butter and margarine

Prepared in Department of Agricultural Economics
College of Agriculture
University of Illinois

PEOPLE ARE NOW EATING LESS FATS

People are eating less fats than they were eating prewar. The consumption of fats in the U. S. declined from a prewar average of 44.7 pounds per person to 41.7 pounds in 1947, a net decrease of 7 percent. These are the figures of Roland W. Bartlett, professor of agricultural economics of the University of Illinois.

During the same period the per capita consumption of eggs increased 27 percent, meat 23 percent and

milk and cream 17 percent, Bartlett says.

Butter consumption declined most. Butter consumption fell from a pre-war average of 16.7 pounds per person to 11.2 pounds in 1947. Most of the increase in milk and cream consumption is coming from milk formerly used for butter.

Vegetable cooking fats also decreased. Consumption of vegetable cooking fats fell from 11.7 pounds per person for 1935-39 to 9.3 pounds in 1947, a net decrease of 20.5 percent.

But the consumption of margarine

and lard increased. In 1947 people consumed 1.5 pounds more lard and 2.1 pounds more margarine than they did before the war. The 1947 consumption of margarine of 5 pounds per person was slightly less than one-eighth of the total per capita consumption of fats.

— s b d —

BROWN

(Continued from page 19)

as true of crops and commodities as it is of men. The thing that supplies the needs of the consumer better or more economically than others will get the demand.

A constant search is going on for new and better crops. This search is being conducted by capable men with adequate backing. It is quite possible, even probable, they will come up with something that will say to our Little Asa, "Move over and make some room for me." And the amount of room this newcomer can command will depend largely on the strength and stamina of Little Asa when it arrives.

So it behooves all of us to use this lull before the storm to perfect the entire soybean industry to the extent the other fellow will have to make his mouse trap mighty good to be better than ours.

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COHN BIG PRODUCER IN TWO STATES

The increasing interest of Missouri in soybeans as a crop was recognized by the American Soybean Association through the election of a second director on the board from that state at the convention last fall. For the first time Missouri joins the states that are represented by two directors.

But the new director is a leading producer of soybeans in Illinois as well as Missouri! He is H. I. Cohn, Sr., of Cypress Land Farms, Jaywee, Mo., and Valley Farms, Carrollton, Ill. The offices where he directs these farflung enterprises are in Merchants Exchange Building, St. Louis, Mo.

Cohn was born in 1894 at Carbondale, Colo., where his pioneering parents are well remembered. By the age of 7 he had determined to become a farmer and retreated to a neighboring ranch on the day his family moved to St. Louis. He was retrieved, via buckboard, just before train time.

Cohn graduated from Central High School, St. Louis, and the College of Agriculture, University of Missouri, where he majored in soils and geology and was a member of the varsity basketball squad of 1915.

After graduation he accepted an appointment as scientist in the soil survey, Bureau of Soils, U. S. Department of Agriculture. Later he was topographer with the U. S. Geodetic Survey, and served as reconnaissance mapper in the engineers of the 89th division during World War I.

After the war he went back to the Bureau of Soils in Polk County, Mo. In 1920 he was married to Blanche Bloche, an accomplished St. Louis musician. One son, Henry I. Cohn, Jr., represents International Harvester Co. as a dealer at Carrollton, Ill., and assists in the management of the farms.

The early 1930's found Cohn, Sr., buying cut-over swamp land in New Madrid County, Mo. Three thousand acres of this rough area were converted, after many years, into what is now known as Cypress Land Farms.

Early in the game he cooperated with Dr. Burt Johnson, then in charge of fibre testing for Good-year Tire & Rubber Co., in helping to prove that many of the fine staple cotton varieties could be grown in the boot-heel of Missouri.

He recognized also that cotton

could not be the only major crop in the boot-heel, so cooperated with G. H. Banks in selecting Arkosy 2913, one of the early successful varieties in the area. From the first, Cypress Brand soybeans have been well known by Southern planters.

In 1939 Cypress Land Farms bought a two-thirds interest in the 10,000-acre Fairbanks Ranch located in the Illinois River valley. The ranch had been assembled by Charles Warren Fairbanks, vice president of the United States under Theodore Roosevelt. This property has been developed into one of the fine farms of the country. From 3,000 to 3,500 acres of soybeans are planted on the two farms. Other crops consist of cotton, 1,200 acres; corn, 2,500 acres; wheat, 2,000 acres; alfalfa, barley and lespezeza. Large numbers of cattle and hogs are also raised.

New farming methods are constantly being employed. Defoliants developed on Valley Farms were successfully applied to the 1949 soybean crop. The formulation shows great promise, Cohn believes. The two farms are distributors of the products of Shell Chemical Corp. over a wide area.

Cohn carries on agricultural and chemical research in the Everglades area in Florida during the winter months. He has designed a sulky type spray cart for all around farm use.

The new St. Louis director is a member of the St. Louis Merchants' Exchange.

— s b d —

TEST VITAMIN B₁₂ NEED

Through use of a synthetic milk containing a soybean product regularly used in paint, a University of Illinois scientist has determined just how much Vitamin B-12 is needed in the diet of growing pigs.

This is of importance to farmers raising young animals or poultry of any kind on a corn-soybean diet. This diet lacks the vitamin—referred to in agriculture as the "animal protein factor"—which must be added if the animals are to thrive.

Professor B. Connor Johnson of the division of animal nutrition in the University's College of Agriculture is the scientist. He presented his finding before the American Institute of Nutrition in a paper titled "Quantitative Vitamin B-12 Requirements of the Pig."

He found that three ten-millionths of an ounce of the pure B-12

(9 micrograms per pound) is necessary to every pound of food given to young animals. His tests were made with 40 pigs, starting when they were 2 days old and continuing until they were 8 weeks old.

During this time they were fed a synthetic milk whose protein ingredient was a soy product obtained from a paint company. The milk completely lacked the vitamin. When it was not added, the pigs were stunted in growth. With a sufficient amount of it, they grew rapidly. By varying the amount, the exact ratio to total food supply was learned accurately.

SOLVENT EXTRACTION PLANTS

FUNCTIONAL PROCESS DESIGN CONSTRUCTION

General Construction & Mechanical Division Fuel Economy Engr. Co.

This organization has established a sub-division under the direction of Mr. A. W. Loengood which renders available his extensive experience in this field, in combination with the long experience and construction facilities of the General Construction Division, in Bldg. constr., Mech. & Process Piping installations.

FUEL ECONOMY ENGINEERING CO.



508-9-10 New York Bldg.
ST. PAUL, MINNESOTA
"General Construction
& Mechanical Division"



Publications

WHAT MAKES BEAN MARKET TICK?

How do soybean prices get that way?

The industry is familiar with the fact that soybean prices from year to year show a fairly consistent seasonal price pattern. Prices received by the farmer decline during the fall, then rise in winter and spring months to reach a peak the following June or July.

This was true in prewar years, and the pattern has been re-established since the war, though there have been some wide fluctuations.

Why? What are the factors affecting the prices of soybeans, and of meal and oil?

An exhaustive study into soybean prices has been made by Don Paarlberg of the department of agricultural economics at Purdue University, Ind.

Contrary to the general impression, the supply of soybeans and soybean products has only a minor effect on the price. Paarlberg has concluded, Supply has much less effect on prices than is true of most other farm crops. This is because the meal and the oil are readily interchangeable with other products.

For this reason the price of soybeans—and oil and meal—is much more affected by the general price level than it is by supply.

The price of beans reacts sharply to the general price level and is affected by the price of meal and oil.

The price of meal is affected by the general price level, the price of

beans and oil, and feed prices in general.

The price of oil is affected by the general price level, the price of beans and meal, and cottonseed oil and butter.

The percentage of the processors' dollar—the amount that the processor realizes from the sale of the oil and the meal—the farmer receives varies widely from year to year. There is also a seasonal variation, with the farmer's percentage being lowest in the fall months and highest the following June.

PRICES OF SOYBEANS AND SOYBEAN PRODUCTS. Station Bulletin 538. By Don Paarlberg, department of agricultural economics, Purdue University, Lafayette, Ind.

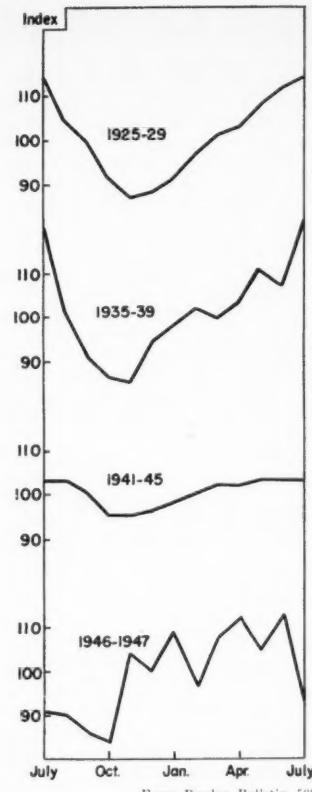
Survey of Industry

Undergraduate work of more than usual merit is two term reports on the soybean industry by Mrs. Ruth F. Anthony at Utopia College, Eureka, Kans.

The reports are "A Survey Report on the Soybean Industry," and "Marketing the Soybean and Its Products."

The papers show much patient research and a very good grasp of the subject. The obvious limitations are those imposed by the references, which were somewhat limited and not all of them of recent date.

As an example, the author sees real promise for soy products in plastics though the Ford Co. itself



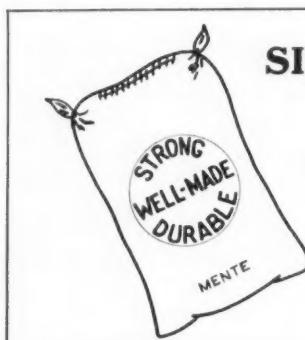
From Purdue Bulletin 538

Index numbers of seasonal variation in the farm price of soybeans in the U.S., four different periods. (Yearly average equals 100.)

abandoned the enterprise years ago.

But developments in the soybean industry have been too rapid for anybody to keep up with all of them, including people in daily touch with the field.

These are good papers considering the limitations of the average



**SINCE 1885... GOOD BAGS
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Burlap or Cotton Bags of All Kinds . . .
New or Used — Printed or Plain — Laminated

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Savannah

New Orleans

Houston

college library. The author shows real promise.

A SURVEY REPORT ON THE SOYBEAN INDUSTRY. 23 pages. MARKETING THE SOYBEAN AND ITS PRODUCTS. 25 pages. Typed manuscript. By Mrs. Ruth F. Anthony, Utopia College, Eureka, Kans.

Soy in Bread

Enzyme active full fat soya is the only natural product without any additions such as chemicals, starches, etc., offered to the baker, which will do most of the things claimed for the more expensive bread improvers—economize in yeast, retain moisture and improve color and texture.

When soya is introduced to bakeries that already use improvers, the question arises as to whether these should be discontinued or used in addition to the soya. If the improvers in use are of vegetable origin they will mix well with soya. If they are of chemical origin they should be used with care when soya is present.

USE OF SOYA IN BREADMAKING. By Frank Longworth. Second of four articles on soya for the baking industry. Confectioner Baker, Nov. 1949.

Tennessee

The soybean varieties S-100, Ogden and Volstate are recommended for Tennessee. They are early, mid-season and late respectively. Through their use the grower can distribute his harvest over the period of a month or more. They are recommended for high oil content and good quality as well as yield.

Performance of the three varieties in Tennessee has been about equal over a period of years, though rainfall distribution in any one year may favor one variety.

The Wabash variety was added to the trials at the Tennessee station last year.

VARIETY PERFORMANCE TRIALS OF FIELD CROPS. Bulletin No. 214, Jan. 1950. By Sam F. McMurray, University of Tennessee, Agricultural Experiment Station, Knoxville, Tenn.

Miscellaneous

WORLD SOYBEAN PRODUCTION IN 1948. By Merna Irene Fletcher. Scientific Monthly, Feb. 1950.

A detailed study of world soybean production in 1948. Complete results of Miss Fletcher's studies in soybean production will eventually be published as part of the "Centennial Studies Project" of the American Geographical Society. Author is assistant professor of geography at the University of Missouri.

IOWA LAND PRODUCTIVITY. Bulletin No. 93.0. Iowa Crop and Livestock Reporting Service, 1019 High St., Des Moines, Iowa.

Includes maps showing yields per acre of all land in farms by counties and townships of various crops including soybeans. Heaviest production area for soybeans is north central part of the state.

CIRCLEVILLE, OHIO

LAFAYETTE, INDIANA

KANSAS CITY, MISSOURI

ST. LOUIS, MISSOURI

IOWA FALLS, IOWA

PURINA'S NEWEST SOYBEAN MARKET

New Bloomington, Illinois, plant will process 250,000 bushels a month!

One of the world's best customers for the soybean—the Ralston Purina Company—announces a new market—the just-completed 250,000-bushels-a-month plant at Bloomington, Illinois. This makes six cash markets serving you who have soybeans to sell.

Buy the Feeds that use the Soybean!

PURINA CHOWS

GRITS and FLAKES . . .

FROM THE WORLD OF SOY

It has recently been announced that the manufacturing operations and sales functions of Phillips Chemical Co., subsidiary of Phillips Petroleum Co., have been combined under the supervision of G. W. McCullough at Bartlesville, Okla.

Eriez Manufacturing Co., Erie, Pa., announces the appointment of Arlo Israelson as chief engineer replacing W. W. Mojden, now with Mills-Winfield Co., Eriez sales office in Chicago.

Planters Manufacturing Co., Clarksdale, Miss., is erecting a new Muskogee-type all-steel seed house to replace one of its wooden houses. The new house will have a capacity of 16,000 tons. Cecil Crawford, superintendent, is in charge of construction.

F. P. Brown has left the employ of Ipava Farmers Processing Co., Ipava, Ill., to go into the grain and feed business in Sterling, Ill.

A Muskogee-type seed house is being erected at Riverside Oil Mill, Marks, Miss.—capacity 750,000 bushels of soybeans. The mill building is being enlarged to take care of additional crushing and cleaning equipment and rolls to handle increased capacity. Jim Munson, superintendent, is in charge.

Otho V. Tally has been named manager of Allis-Chalmers Midwest region succeeding Benjamin F. Bilsland, who is retiring July 1 after more than 30 years of service. Tally, whose headquarters are in Chicago, was formerly manager of the St. Louis district. Baldwin G. Witty, former sales representative in the company's Chicago office, succeeds him.

R. D. Moody has been made manager of the Los Angeles district of Allis-Chalmers Mfg. Co., succeeding C. W. Schweers who was transferred to the company's New England region.

Delta Warehouse and Brokerage Co., Indianola, Miss., is constructing additional soybean storage houses.

Story of the soybean oil mill solvent-extraction installations of the Ralston Purina Oil Mills at Iowa Falls, Iowa and Bloomington, Ill., appears in the March issue of Link-Belt News.

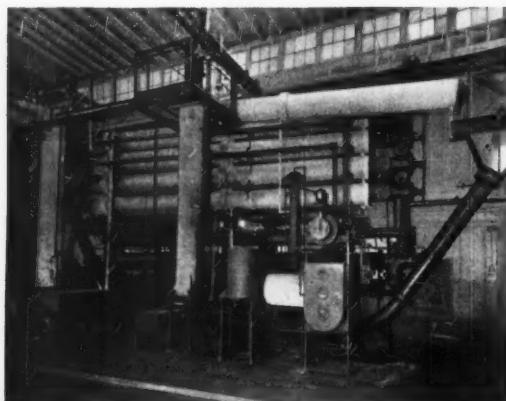
McMILLEN PROMOTES



Promotion of Edward E. Reynolds to the position of general sales manager of McMillen Feed Mills has been announced by H. W. McMillen, vice president and director of sales of McMillen feed mills division, Central Soya Co. Inc. Reynolds has been serving as assistant to the director of sales for the past 3 years. Reynolds is a graduate of the University of Illinois and was associated with the Des Moines Register-Tribune and the Wilson Meat Packing Co. following graduation. In 1942 he joined Central Soya Co. Inc. as assistant treasurer.

FOR SAFE, PROFITABLE EXTRACTION

...A PROVED AND TESTED NON-FLAMMABLE SOLVENT OIL EXTRACTION PLANT



• Here is a small (twenty-five ton), efficient extraction system especially developed for use in smaller operations. This plant, thoroughly tested and proved, uses non-flammable Trichlorethylene solvent and is manufactured under exclusive patent rights of Iowa State College. Operating data on this system, including figures on consumption and yield, will be provided on request.

You are invited to see this plant in actual operation.
Write for additional information.



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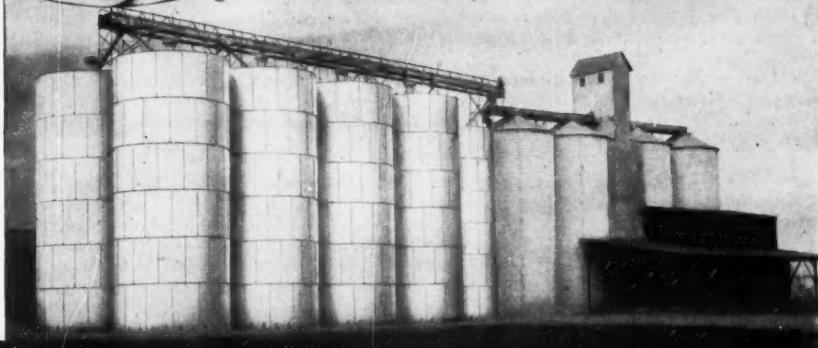
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Make Room for More Profits

BOLTED STEEL GRAIN TANKS...

This ten-unit installation of Butler Bolted Steel Grain Tanks added 141,000 bushels capacity to existing facilities of a soybean company in Hayti, Mo.



The Quick...Low Cost
...Modern Way...

to Enlarge Your Elevator

Check These Advantages of Butler Grain Tanks for Soybean Storage...

- Minimum Investment
- Low Construction Cost
- Speedier Erection
- Fire Safe, Weather Tight
- Greater Structural Strength. Longer Life
- Easily Integrated with Existing Facilities

Now... provide additional soybean storage facilities quickly, safely, economically. Compact and economical to erect, Butler Bolted Steel Grain Tanks are ready for erection on your foundation... go up fast... thanks to sturdy, bolt-together construction features. Low initial cost and longer life help you save money... extra elevator space helps you increase your income. Get ready now for the soybean harvest... Decide now to erect Butler Bolted Steel Tanks. A Butler engineer will be glad to assist you with your planning. Mail the coupon below today.

BUTLER MANUFACTURING COMPANY

Kansas City, Mo. Galesburg, Ill. Richmond, Calif. Minneapolis, Minn.

For Prompt Reply, Address Dept. SD15 at Office Nearest You:

7461 E. 13th Street, Kansas City 3, Mo.
961 6th Ave., S. E., Minneapolis 14, Minn.
Dept. UU, Richmond, Calif.

Send complete information on Butler Bolted Steel Grain Tanks.

Name _____

Firm _____

Address _____

FOR FULL
INFORMATION

Tear Off and Mail
This Coupon

TODAY

Spencer Kellogg & Sons, Inc., Buffalo, N. Y., is expanding soybean storage and freight car unloading facilities at Decatur, Ill. The expansion will add 2,500,000 bushels to the company's soybean elevator capacity.

Central Soya Co., Inc., Gibson City, Ill., is making plans to build 20 new concrete bins increasing total capacity to 6 million bushels. Indiana Construction Co. of Fort Wayne, Ind., has been awarded the contract.

To promote maintenance of electrical machines, Allis-Chalmers is making available in booklet form a series of articles by Fraser Jeffrey, assistant to the company's chief electrical engineer. Copies of "Care of AC Rotating Equipment," 05R7417 are available on request from Allis-Chalmers Mfg. Co., 1159 S. 70th St., Milwaukee, Wis.

The appointment of C. L. Reynolds as control manager for the Union Bag & Paper Corp., Minneapolis, Minn., was announced recently. Reynolds succeeds W. A. West who has resigned.

Changes in sales personnel announced by Bemis Bro. Bag Co., in the Kansas City area made necessary by the resignation of J. O. Frahm, include Harvey C. Wilson to the southern Kansas area and W. B. Kruse to the eastern area.

Ace R. Cory, assistant manager of Cargill, Inc., Toledo and Maumee, Ohio, has been elected a member of the Toledo Board of Trade.

Stoddard County Grain Co., Advance, Mo., is erecting five Black, Sivalls & Bryson steel tanks which will bring its total storage capacity to 70,000 bushels.

A. N. Willis has been named general manager of Dearborn Motors Credit Corp., a new organization to assist in financing wholesale and retail purchases of Ford Tractors and Dearborn Farm Equipment. Central offices are located at 15050 Woodward Ave., Detroit, Mich.

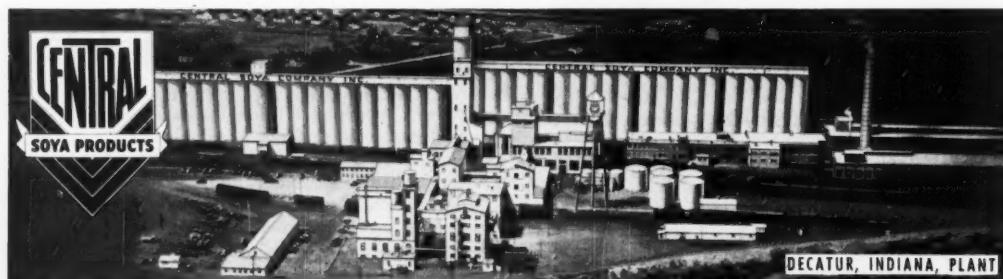
TO LEVER BROS.



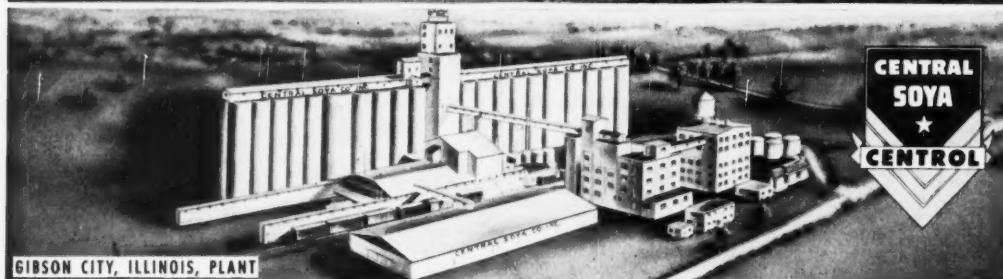
ROBERT G. SPEARS

Appointment of Robert G. Spears as vice president and general manager of the Jelke Good Luck products division of Lever Brothers Co. has been announced by Warren N. Burding, Jelke president. Spears is widely known in the margarine industry.

Spears first entered the margarine business in 1921, after graduation from Purdue University, when he



DECATUR, INDIANA, PLANT



GIBSON CITY, ILLINOIS, PLANT

Serving American Industry
THE CENTRAL SOYA COMPANY, INC.
(EXECUTIVE OFFICE)
FORT WAYNE, INDIANA



NO WONDER MEAL MILLS
HAVE SHIFTED TO THESE

LOWER-COST, CLEANER

ST. REGIS MULTIWALL PAPER BAGS

For one thing, costs are a big item these days both for you and your customers. You can pack more meal in less time at lower man-hour cost when you . . .

**USE ST. REGIS MULTIWALL PAPER BAGS
ON THE ONE-MAN ST. REGIS PACKER**

St. Regis Multiwalls are engineered for their specific jobs. Your meal will be packed in stronger, cleaner bags when you use St. Regis Multiwalls. You will gain by greater operating efficiency and lower packing costs, too.

You will benefit again by greater good-will from your

dealers and their farmer and feeder customers. Naturally they prefer meal in St. Regis Multiwalls that keep meal *in*—keep moisture, dirt and insects *out*—keep warehouses, barn floors and trucks cleaner.

When your meal is bagged and shipped to the feed manufacturer as an ingredient, he too will like the savings and protection.

Call your nearest St. Regis Sales Office and let us show you how much you can save in costs by packing your meal in St. Regis Multiwalls.

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Wm. C. Esmueller, 73, chairman of the board of the Esmueller Co., St. Louis, Mo., died recently. He had been with the company which was founded by his father since 1894. A son, Arthur F., is president of the company and a brother, Bernard H., is vice president and manager of the Kansas City plant.

Edward J. Grimes, vice chairman of the board of Cargill, Inc., Minneapolis, Minn., is a candidate for election to the board of directors of the Chamber of Commerce of the United States to represent agriculture.

Wheeler McMillen, editor-in-chief of Farm Journal, will be the keynote speaker at the American Feed Manufacturers Association 42nd annual convention scheduled for the Stevens Hotel in Chicago May 11-12.

The Chicago Board of Trade observed its 102nd anniversary on April 3.

Eriez Manufacturing Co., Erie, Pa., has announced redesign of its permanent magnetic pulleys. The improved models provide increased magnetic power, lighter weight and greater structural strength.

Burrows Equipment Co., Evanston, Ill., announces an expansion of its office facilities and the appointment of Lester Ohle to its staff of specialists in grain, seed, feed and milling industries. Ohle was formerly connected with the Quaker Oats Co. at Chicago, Ill., and Cedar Rapids, Iowa.

Something of the history of Central Soya Co., Inc., and the present opportunities for investment in the firm were described by Walter A. Schmidt, Schmidt, Poole & Co., Philadelphia, Pa., in Mar. 9 Commercial and Financial Chronicle.

Bert Fullerton, Correctionville, Iowa, was recently presented with the W. G. Skelly Agricultural Achievement award for good farming which includes raising of soybeans.

"The World is Our Nursery" by Lewis P. McCann is title of an article dealing with the history of soybeans and their introduction into this country from southeastern Asia. Article appears in the March issue of Foreign Agriculture.

For 10 years of continuous service with Swift & Co. at Champaign, Ill., Delbert Foltz was recognized recently and presented a silver service emblem with two stars. Foltz is top floor operator in the oil extraction process there.

Cypress Supply Co., Portageville, Mo., a newly formed subsidiary of Cypress Land Farms, Jaywee, Mo., is building a 75,000-bushel elevator complete with Campbell Dryer. Tanks are furnished by Butler Manufacturing Co. A warehouse with 35,000-bushel capacity for soybeans is also being built.

Planters Gin Co., Gideon, Mo., is building a 118,000-bushel elevator. Butler Manufacturing Co. tanks are being used.

assisted in the expansion of the newly established Standard Margarine Co., Indianapolis.

He helped to pioneer the use of soybean oil in margarine and led in the development of refining techniques of soybean oil used in margarine.

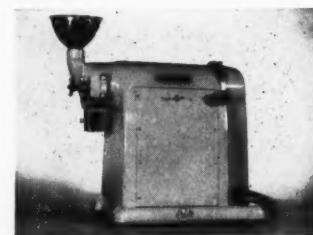
Standard Brands acquired the Standard Margarine Co. in 1942, and Spears became Standard Brands product manager, the post he leaves to join Jelke.

Spears was chairman of the committee in charge of the preparation and production of the margarine film, Progress in Products, sponsored by the American Soybean Association and National Cotton Council, and which has shown to over 1 million people.

Jelke's new vice president is chairman of the executive committee of the National Association of Margarine Manufacturers.

- s b d -

NEW MILL FOR LABS



The new "Labconco" heavy duty mill is designed to speed work in laboratories where a large number and variety of samples are continuously prepared. This streamlined new mill quickly reduces samples to the particle size desired and is particularly effective with agricultural and animal products. The new "Labconco" mill occupies little bench space. The base plate is 12 $\frac{1}{2}$ inches x 17 $\frac{1}{4}$ inches, height, 19 inches. It is a product of the Laboratory Construction Co., 1115D Holmes Ave., Kansas City, Mo.

327 So. La Salle St., Chicago 4, Ill.

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CRUDE AND REFINED VEGETABLE OILS

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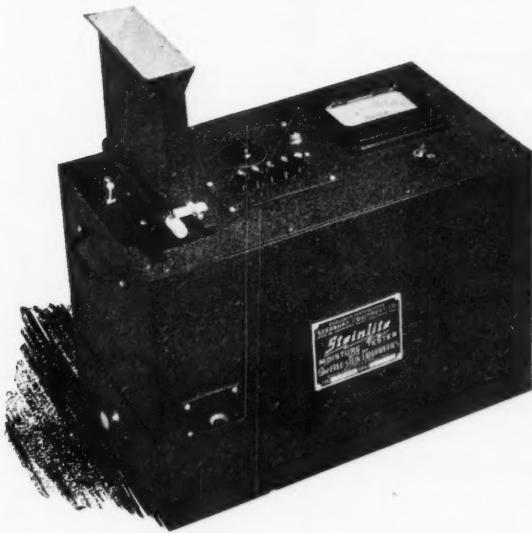
Our close contacts and long successful experience in servicing the trade can be of benefit to your organization. Please try us.

14,989

users prove

Steinlite

the Ideal Moisture Tester!



More Steinlite Moisture Testers are used today by seedsmen, elevators, mills, co-ops, food processors, etc., than all other types combined.

If you want to speed seed or grain testing and handling, with the full, profit-protecting accuracy of the Steinlite Moisture Tester, mail the order coupon today. We'll ship on ten days' free trial! Price \$330.00, F.O.B. Atchison, Kansas.

SEEDBUREO

EQUIPMENT COMPANY

729 Converse Bldg., Chicago 6, Ill.

MAY, 1950

here are 8 reasons why

1. **FAST** . . . requires only ONE MINUTE to make an accurate seed or grain test. Speeds handling in peak periods.
2. **ACCURATE** . . . on moisture content up to 35%.
3. **SIMPLE** . . . no technical knowledge or previous experience required to operate efficiently.
4. **COMPACT** . . . easily portable. Operates anywhere there is an electrical outlet.
5. **DEPENDABLE** . . . calibrated against official Government oven methods. Comparable results guaranteed.
6. **VERSATILE** . . . will test wide variety of seed, grain, grain products, grain of mixed moisture content, blended grains and processed materials.
7. **ECONOMICAL** . . . pays for itself in one season of high moisture crops.
8. **GUARANTEED** . . . sold on 10-day, free trial basis.

Steinlite Order Coupon

Seedburo Equipment Company,
729 Converse Building, Chicago 6, Ill.

Gentlemen: Ship at once for 10 days' free trial, on Steinlite Moisture Tester for seed, grains, etc. At the end of the 10-day trial period, we will remit our check for \$330.00 plus shipping charges, or return the Steinlite Moisture Tester at once.

Firm name.....

Address..... RD.....

City..... State.....

Robert E. Lee Wilson, III, trustee and general manager of Lee Wilson & Co., Wilson, Ark., will rule as king of the 1950 Memphis Cotton Carnival. Miss Mary Letitia Gregg will reign as queen.

* * *

Louis Champlin, editor of Progress Through Research, General Mills' house organ, spoke on "Some House Magazine Achievements" at the Iowa Industrial Editors Association short course at Iowa State College, Ames, Apr. 21.

* * *

E. D. Renner, Sikeston, Mo., has started the Renner Feed & Supply Co., at Sikeston. He plans to handle soybean seed, both retail and wholesale.

* * *

Falk & Co., Pittsburgh, Pa., producers of soya oils, fish oils, linseed oils and alkyl resins, announce the election of Samuel Aronoff as vice president in charge of eastern sales.

* * *

Dr. Percy L. Julian, director of research, Glidden Co.'s soya products division, is featured as one of the outstanding Negroes in America by Coronet magazine in its May picture story, "The Negro in America."

* * *

E. C. Hillweg, Minneapolis, Minn., has resigned as executive vice president and secretary of the Minneapolis Grain Exchange to take a rest. He has been on the staff for 20 years. Ron Kennedy, Minneapolis, is his successor.

* * *

Harvey Maxhausen, formerly manager of Cargill's Fort Dodge, Iowa, plant has been appointed manager of the firm's Minneapolis, Minn., soybean and flaxseed plant.

* * *

Emerson G. Morse has been named director of purchases of Lever Brothers Co., New York. He succeeds James F. Reeves, who retired because of ill health.

* * *

Allen-Davis Cotton & Grain Co. of Mathews, Mo., is putting up 112,000-bushel elevators at East Prairie and Kewanee, Mo. Tanks are furnished by Butler Manufacturing Co.

* * *

Eunice B. Turner, Mexico, Mo., has been employed by A. E. Staley Manufacturing Co., as feed sales department representative to work in Missouri and Illinois.

* * *

P. B. Bartmess, Mgr., Sikeston Cotton Oil Co., Sikeston, Mo., has announced the construction of a soybean processing plant in conjunction with the cotton oil mill. The six French Screw Presses are expected to be ready in August.

* * *

Damon Headden & Son, Ridgley, Tenn., is installing eight 28,000-bushel Butler tanks.

* * *

Mente & Co., Inc., New Orleans, will sponsor an open house cocktail party at the joint convention of the Georgia Cottonseed Crushers Association and the Alabama-Florida Cottonseed Products Association, June 3-6, at Savannah, Ga.

JOHN DEERE ELEVATOR



Here's the new John Deere many-purpose Small Grain Elevator. The John Deere loads bins or box cars, takes grain from bins, and picks up grain from piles in the field. It eliminates the hard work of hand scooping, reduces man hours, and speeds up harvests. The new John Deere may be equipped with a big-capacity hopper for loading bins or box cars or with an extension auger and hopper for emptying bins and picking up grain piles. Either attachment is regular with the other as an extra. Elevator sections are made of heavy tubular steel. Big-capacity, long-wearing rubber flights will not damage grain. A well-braced, tubular-steel truck, carried on roller-bearing, rubber-tired or steel wheels, gives plenty of support and maneuverability.

— s b d —

NEW IOWA PLANT

A contract for a \$750,000 solvent plant to be completed in Sioux City, Iowa, by November, has been let to French Oil Machinery Co., Piqua, Ohio. Henry M. Sherman, president of Sioux Industries, Inc., announces.

Construction began Apr. 25. The new plant will be built just north of the present Sioux Soya plant.

The new plant will have a daily crushing capacity of 4,500 bushels of soybeans. Sioux Industries now operates two screw press plants, Sioux Soya Mills at Sioux City, and Western Soybean Mills, Sioux Falls, S. D. The three plants will have a daily crushing capacity of 11,000 bushels a day. Sherman says.

DICKINSON BROTHERS CO.

VEGETABLE OILS AND MEALS

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HArrison 7-3793
CHICAGO 4, ILL.

SOYBEAN DIGEST



ANOTHER FIRST IN SOLVENT EXTRACTION!

NEW RICE BRAN PLANT.... ALLIS-CHALMERS EQUIPPED

YES—HERE'S THE NEWEST in continuous solvent extraction plants . . . the first of its kind in the world. Engineered and equipped by Allis-Chalmers for American Rice Growers Co-operative Association in Houston, Texas, this 50 ton rice bran mill is now in operation.

A-C SYSTEM PRODUCES OUTSTANDING RESULTS

Four definite advantages resulting from this solvent extraction process have been apparent right from the start. 1) An edible and salable vegetable oil—in quantities to $7\frac{1}{2}$ tons per day—has been produced from freshly milled rice bran . . . 2) Extracted meal is in great demand as a livestock feed because it has higher protein content than raw bran . . . 3) Extracted bran can be kept indefinitely without danger of turning rancid . . . 4) Wax removed from rice bran by solvent extraction process, and now being lab-tested, may prove to be valuable by-product.

These are the straight facts on a new solvent extraction product—milled rice bran. And Allis-Chalmers has sound, factual information on other vegetable oil products, too—such as soybeans, cottonseed and corn germ . . . products in which A-C has pioneered. Why not discuss *your* solvent extraction possibilities with one of our friendly district office men. There's no obligation.

Send this handy coupon for illustrated 20-page bulletin and other information on the Allis-Chalmers continuous solvent extraction system.

ALLIS-CHALMERS, 1159A SO. 70 ST.
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WASHINGTON Digest

THE BULL MARKET. Government officials think the bull market in soybeans ought to tone down soon, but are not sure how much or how soon.

The wave of business optimism that is sweeping the country is affecting practically every commodity. It is knocking market prognosticators for a loop. They're not cocksure about anything price-wise any more.

USDA market men still stick to the price curve they charted for beans last winter, but they've softened and elevated the curves. The curve rises to a peak in May or June, then descends to an early harvest season low. Thinking now is that the harvest low may not sink to the expected price support of around \$1.75.

The best bean men in USDA are frankly puzzled, and refuse to make even private predictions as to the short-time price. Except for one thing: They figure the bull market will break most any time, and that it's risky holding for speculative profits.

Factors that may end the bull market as seen here are:

1—Exports have fallen.

2—Price reached in late April was at least 30c a bushel higher than oil and meal prices justified.

3—It's believed that large users have filled their inventories as a result of heavy first quarter buying.

Bean exports to Germany following announcement of the 2-million-bushel deal were disappointing to the end of April. Only one cargo of 336,000 bushels had been bought from CCC the first 6 weeks after the

deal was made public. Volume of commercial exports isn't known here, but it's believed to be small.

ECA refused to buy beans when they could be had for \$2.25—officials thought the price would come down. Requisitions on CCC were made, then withdrawn for rewriting of tighter grade specifications. Finally ECA bought one lot at \$2.85. Army stopped buying for Japan because of the high price.

Efforts of PMA to peddle soybean and cottonseed oil to Germany failed. Germans want beans or nothing.

Meantime negotiations have been started for an involved U.S.-Japan-Manchurian cotton-soybean deal. U. S. would supply the Japs cotton, which would be swapped in raw or finished form for 2 million bushels of Manchurian beans. If completed, the deal would have the same effect as dumping 2 million bushels of beans on the U. S. market.

Upshot is that at end of April, USDA officials were far from sure that the 2 million bushels of beans would be shipped to Germany, let alone the 4½ million bushels talked in the early part of the month.

Total bean exports this marketing year up to May 1 are estimated by officials at about 8 million bushels, compared to 18-20 million bushels the same time a year ago.

As to inventories, government market men are merely guessing that an "inventory cycle" may now, or soon will be, completed. These cycles have been observed in the postwar years: stock depletion, heavy buying early in year, cessation when large users are stocked up again. It has to be guess work on

By PORTER M. HEDGE

Washington Correspondent for
The Soybean Digest

the part of government men because they have no stocks reports indicating what large users have on hand.

On the other hand, a recent ECA survey indicates that the U. S. is getting a little tight on fats and oils supplies, and will be to the end of the present marketing year Sept. 30. There's an expectation among some in ECA that the bean price will level off at what solvent extractors can come out on, and stay there. That's estimated at around \$2.65-\$2.70.

1950 OUTLOOK. Looking ahead to the 1950-51 marketing year, the outlook is more bullish than USDA men thought a short time ago. This in spite of a bean crop believed sure to be larger than the March intentions to plant report indicated.

USDA men think the 1950-51 season's average price will be lower than for the past year, but not so sharply lower as estimated during late winter and early spring. The reason for the shift in outlook:

1—Widespread general business optimism. It is touching prices of every product except those that are decidedly overproduced or for which changes in taste are causing shifts in demand.

2—A probable small cotton crop. Not only will acreage be down, but USDA entomologists say 1950 may become known as "The Boll Weevil Year."

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3—Continued world shortage of fats and oils. It's expected to last until Manchurian supplies of soybeans become available again. Indian peanut production is resumed in a big way, or African developments materialize. The shortage is due to last at least a year or two.

4—Relatively large amounts of dollars available in ECA program for soybean exports. Beans are expected to be cut less than any other farm product except cotton.

5—The favorable livestock price prospect and a relative shortage of protein meals to match livestock expansion. Even for hogs, the outlook is now so much better than anticipated that some further expansion is due.

The chief additional source of protein feeds is soybean meal. A recent USDA study says that it would require two-and-one-half times as much soybean meal as now produced to provide U. S. livestock balanced rations. This assumes that the entire deficit is supplied by soybean meal.

The study is by R. D. Jennings of the Bureau of Agricultural Economics. It's called "A Look at the Protein Situation for Livestock."

1950 SUPPORTS. The price relationship between soybeans and cottonseed has come in for intensive study in PMA in preparation for setting 1950 crop price supports for the two crops. Officials feel they can't set support levels for these very much out of line with each other without trouble.

Cotton officials have worked up charts showing that \$42.50 a ton for cottonseed would be equivalent to at least \$1.90 a bushel for beans on a strictly competitive basis. They're recommending to CCC support for cottonseed between \$40 and \$45 a ton this year. If support for beans is set at \$1.75 a bushel, the cotton men think it will tend to price cottonseed oil and meal out of the market, even if cottonseed support is put down to \$40 a ton. They argue that it would force the government to become the chief buyer of cottonseed.

Soybean market men don't entirely accept the findings of the cotton men. They want to keep the bean price no higher than \$1.75 a bushel, and preferably \$1.70. They think such a price and \$40 a ton cottonseed wouldn't bring dire results.

The politically potent South won't stand for cottonseed support this year of less than \$40 a ton, officials think. The soybean support will be

set first—within a week of the time Congress votes the \$2 billion extra money for CCC. If soybeans are priced around \$1.75 a bushel, this would be used by USDA later as a reason for keeping cottonseed support close to \$40 a ton.

PMA OVERHAUL Senator Gillette's subcommittee report on fats and oils recommended that the PMA fats and oils branch be overhauled. Senate dissatisfaction is due in part to the unfavorable attitude of the branch to special treatment and high price support for tung oil. Tung nuts are grown only in six states, and the crop amounts to only about \$4 million annually. But the tung nut area has 12 Senators.

Senators noted, too, that the fats and oils branch isn't potent in the action program field. It does a lot of research work, but most of its action functions have been given to other branches: soybeans and flax to grain branch, cottonseed support to cotton branch. Peanut acreage allotment and marketing quota work is handled by fats and oils branch, but grade inspection work is handled in the fruits and vegetables branch.

Top level planning in USDA calls for eventual fold-up of the fats and oils branch. Its various functions are to be combined with similar ones in grain, cotton, livestock and other PMA branches.

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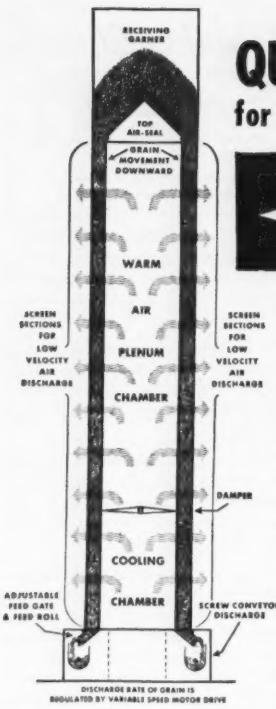
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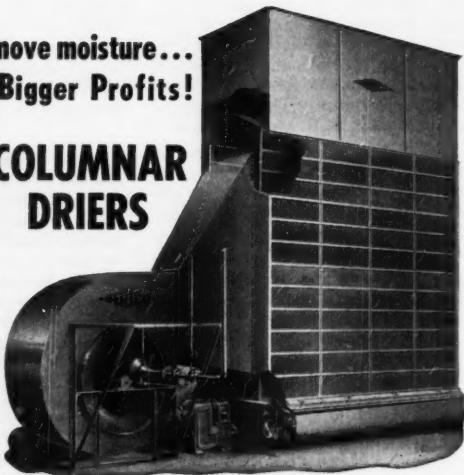
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In The MARKETS

BEANS, MEAL SPURT

April saw the soybean futures market accelerate the upward trend begun in February. New highs for the 1950 crop were posted during the month.

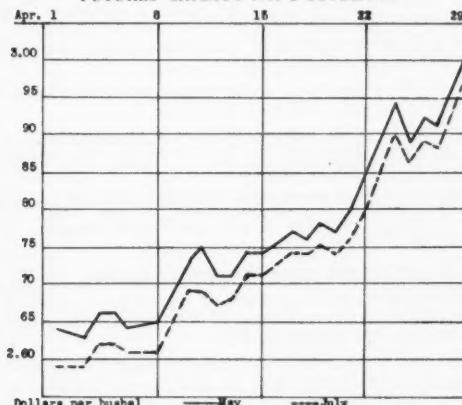
The meal market followed the beans upward during the latter part of April to bring more nearly into balance the bean-meal-oil price relationship and to hit the highest point for meal since October. Price of oil varied little during the month.

Strength in the soybean futures market apparently was based on the belief that supplies may be cleaned up well in advance of the new crop movement, and to some extent on a large trade in seed brought about by an expanding acreage. Processors were having to bid up to get available beans. But there were reports that plants were closing due to an unfavorable processing margin.

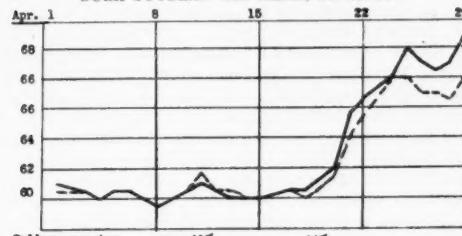
Futures weakened somewhat the last of the month following reports that the government would halt purchases of soybeans for Germany and Japan and sell lard and other cheaper oils.

Expanding demand and tightening supplies pushed the meal market higher the latter part of April. Large

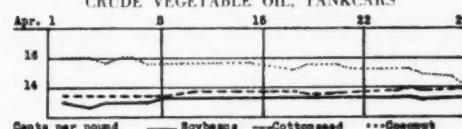
FUTURES CHICAGO NO. 2 SOYBEANS



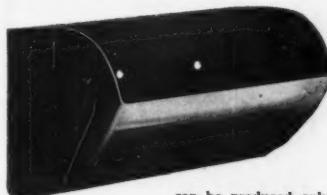
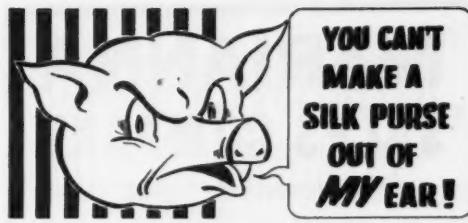
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tonnages were traded on the rising market. Activity slowed again the last few days of the month.

The rise in soybean futures resulted in a stagnant soybean oil market, as processors refused to sell at going prices for oil.

Volume of trading in soybean oil meal futures on the Memphis Merchants Exchange has been several times heavier this spring than last. All records were broken Apr. 20 when 20,700 tons of meals were traded, mostly soybean.

Several processors have petitioned the Illinois Commerce Commission for authority to trade in soybean oil futures on the Chicago Board of Trade. The firms also seek permission to commingle the oil in storage, although there is a state supreme court ruling against this.

Chicago Board of Trade voted Apr. 4 to increase the minimum initial margin on soybeans from 15 to 20 cents a bushel.

U. S. Department of Agriculture reported the following Commodity Credit Corporation export purchases of soybean oil: Mar. 27-31, refined 5,250,000 lbs.; and Apr. 3-7, refined 1,400,000 lbs. Total purchases of crude soybean oil during the Oct. 1-Apr. 21 period were 124,217,000 lbs.; refined soybean oil 13,215,000 lbs.

U. S. Department of Agriculture reported CCC purchases of soybeans as follows: Mar. 27-31, 971,000 bu.; Apr. 3-7, 657,666 bu.; and Apr. 7-21 455,000 bu. Cumulative CCC purchases of soybeans from October to Apr. 21 were 3,394,069 bu.

Chicago No. 2 soybeans, May futures, opened for the month at \$2.64 and closed at \$3.01, the high. Low was \$2.63 Apr. 3.

Bulk soybean oil meal, basis Decatur, opened at \$61 and closed at \$71, the high. Low was \$59.50 Apr. 8.

Crude soybean oil in tankcars opened at 13c and closed at 13½c. Low was 12½c Apr. 3.

MEMPHIS SOYBEAN OIL MEAL FUTURES CLOSINGS APR. 29*
Decatur sacked basis, per ton: May, 71.25 @ \$72.00; July, flat 73.00; October, 55.35 @ \$5.70; December, flat 54.20; January, 53.75 @ \$45.00; March, flat 54.00. Sales: 11,300 tons.

NEW YORK CRUDE SOYBEAN OIL FUTURES CLOSINGS APR. 29*
June, 13.25b; Aug., 13.26b; Nov., 11.20b; Jan., '51, 10.90b; Feb., 10.80b; March, 11.12b; April, 11.12n. Total sales: 52 contracts.
b-Bid. n-Nominal.

*Reported by the Chicago Journal of Commerce.

● FACTORY USE SOYBEAN OIL. Factory production of crude soybean oil in February was 153,046,000 lbs., reports Bureau of the Census. Production in January was 165,088,000 lbs.

Factory production of refined soybean oil in February was 118,749,000 lbs.; in January 130,317,000 lbs.

Factory consumption of crude soybean oil in February was 128,588,000 lbs.; in January 140,200,000 lbs. Factory consumption of refined soybean oil in February was 111,393,000 lbs.; in January 117,599,000 lbs.

Factory and warehouse stocks of crude soybean oil totaled 78,911,000 lbs. Feb. 28; 82,877,000 lbs. Jan. 31. Stocks of refined soybean oil totaled 66,791,000 lbs. Feb. 28; 66,650,000 lbs. Jan. 31.

Crude soybean oil entered into the following uses in February: soap 111,000 lbs.; paint and varnish 255,000 lbs.; lubricants and greases 20,000 lbs.; other inedible products 1,316,000 lbs.

Refined soybean oil found the following uses in February: shortening 49,254,000 lbs.; other edible 4,534,000 lbs.; soap 41,000 lbs.; paint and varnish 7,031,000 lbs.; lubricants and greases 6,000 lbs.; linoleum and oilcloth 3,415,000 lbs.; and other inedible products 4,442,000 lbs.

Hydrogenated edible soybean oil was used in the following products in February: shortening 9,789,000 lbs.; margarine 17,336,000 lbs.; other 622,000 lbs.

SOYBEAN DIGEST

OIL MILL PRODUCTS. Reported by Bureau of Census, Department of Commerce.

PRIMARY PRODUCTS EXCEPT CRUDE OIL, AT CRUDE OIL MILL LOCATIONS: PRODUCTION, SHIPMENTS AND TRANSFERS AND STOCKS, FEBRUARY 1950—JANUARY 1950

Products	Production		Shipments and transfers		End of month stocks	
	Feb. 1950	Jan. 1950	Feb. 1950	Jan. 1950	Feb. 28, 1950	Jan. 31, 1950
SOYBEAN:						
Cake & meal	363,249	401,127	355,344	386,758	69,655	61,750
Lecithin [†]	1,034,130	1,129,614	1,061,501	1,187,573	911,165	938,536
Edible soy flour, full fat	379	228	408	(*)	222	251
Edible soy flour, others	5,919	4,068	5,724	4,015	2,548	2,353
Industrial soy flour	(*)	(*)	(*)	(*)	(*)	(*)

*Not shown to avoid disclosure of individual operations.

† Unit of measure in tons. \$ Unit of measure in pounds.

SOYBEANS: RECEIPTS, CRUSHINGS AND STOCKS AT OIL MILLS, BY STATES, FEBRUARY 1950—JANUARY 1950

State	Receipts at mills		Crushed or used		Stocks at mills	
	Feb. 1950	Jan. 1950	Feb. 1950	Jan. 1950	Feb. 28, 1950	Jan. 31, 1950
U. S.	308,445	293,982	463,979	507,279	1,626,409	1,781,943
Arkansas	(*)	1,494	9,250	11,338	49,315	64,137
Illinois	126,871	129,300	120,900	131,966	634,474	600,861
Indiana	50,772	16,605	40,733	36,468	1,117	17,218
Iowa	47,492	52,955	50,697	53,792	296,299	238,504
Kansas	(*)	8,258	7,702	10,615	(*)	19,099
Kentucky	7,417	11,676	14,194	15,980	(*)	(*)
Minnesota	10,688	11,796	14,697	13,892	12,032	16,040
Missouri	(*)	9,371	17,656	21,819	(*)	97,703
Nebraska	(*)	650	3,721	5,309	(*)	12,832
N. Carolina	650	1,522	(*)	7,665	(*)	37,949
Ohio	42,961	31,536	60,083	64,928	231,879	250,801
All other	27,165	18,816	32,115	31,877	308,126	180,789

? Receipts exceeded by reshippments of beans previously received and held in stock. U. S. receipts are on a net basis, excluding transfers between mills.

* Included in "All other" to avoid disclosure of individual operations.

SOYBEAN PRODUCTS: PRODUCTION AND STOCKS AT OIL MILL LOCATIONS, BY STATES, FEBRUARY 1950—JANUARY 1950

State	Crude oil (thousand pounds)		Cake and meal (tons)	
	Production	Stocks	Production	Stocks
U. S.	133,048	165,088	32,593	363,249
Arkansas	2,774	3,272	329	1,046
Illinois	62,177	65,123	8,312	136,528
Indiana	13,476	11,910	1,778	1,002
Iowa	20,543	30,265	6,087	6,994
Kansas	2,707	3,726	861	1,065
Kentucky	5,063	5,634	520	649
Minnesota	4,797	4,251	1,992	1,496
Missouri	5,581	6,590	1,718	1,874
Nebraska	1,142	1,609	295	249
N. Carolina	(*)	2,065	457	527
Ohio	19,399	20,785	4,568	5,103
Oklahoma	—	—	47,509	50,916
All other	9,395	9,553	3,205	3,480
			26,179	25,787
			17,050	11,609

? Revised

* Included in "All other" to avoid disclosure of individual operations.

FARM STOCKS. Soybean stocks on farms April 1 are estimated at 44 million bushels, according to the U. S. Department of Agriculture crop reporting board. This is 8.3 million bushels less than the large stocks of a year ago, but with that exception stocks are the largest for April 1 since 1943, the first year of record. The 1943-48 average April 1 stocks were 35 million bushels.

Disappearance from farms for the January-March quarter amounted to 17.9 million bushels. This is well below the 23.2 million bushel disappearance for the corresponding period a year ago. Stocks of farm stored soybeans under government loan and purchase agreement are larger than last year. Also more stocks are being held for seed this year than last because of the expected increase in the 1950 acreage. If farmers carry out their intended acreage as expressed on March 1, about 21½ million more bushels will be required for seed than were used last year.

Nearly 15 million bushels or about one-third of the total farm stocks are in Illinois, the heaviest producing state. The next largest stocks are in Iowa with 8 million bushels. Indiana is third with 6.3 million on hand

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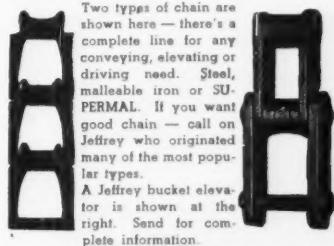
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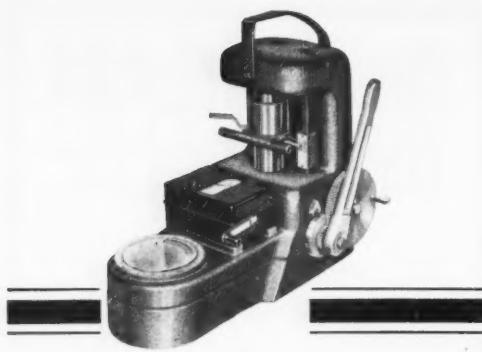
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Evanston, Ill.

April 1. Outside of the North Central area the largest stocks are in North Carolina where nearly a million bushels or about one-fourth of the state's 1949 production is still in farm storage.

SOYBEAN STOCKS ON FARMS ON APRIL 1

State	Average			State	Average		
	1943-48	1949	1950		1943-48	1949	1950
— Thousand bushels —							
N. Y.	80	18	22	Del.	20	195	224
N. J.	90	35	61	Md.	186	188	141
Pa.	154	100	95	Va.	329	359	546
Ohio	4,406	5,026	4,530	W. Va.	4	3	2
Ind.	5,106	6,741	6,302	N. C.	878	927	990
Ill.	11,176	20,124	14,868	S. C.	37	69	124
Mich.	565	512	726	Ga.	26	39	39
Wis.	237	78	114	Ky.	264	460	330
Minn.	1,310	3,904	3,226	Tenn.	116	161	125
Iowa	6,865	9,855	8,058	Ala.	83	72	73
Mo.	1,544	1,900	1,800	Mass.	250	551	368
N. Dak.	15	25	58	Ark.	390	340	466
S. Dak.	66	195	143	La.	107	39	75
Nebr.	79	132	111	Okl.	13	12	17
Kans.	360	200	378	U. S.	34,952	52,279	44,014

• U. S. EXPORTS. The United States now has attained first place in international trade in soybeans as well as in production, reports Foreign Crops and Markets. Record exports of soybeans and oil (as beans) reached approximately 65 million bushels, thus accounting for the equivalent of 30 percent of domestic production last year. Of the total shipments Europe took 62 percent of the beans and 90 percent of the oil.

Canada and Cuba were the principal markets in North America although small quantities of soybean oil went to a number of countries in Central America and in the Caribbean Area.

UNITED STATES: SOYBEAN AND SOYBEAN OIL EXPORTS, 1949 WITH COMPARISONS

Country of destination	Soybeans			Soybean oil†		
	Average 1937-39‡	1948§	1949¶	Average 1935-39	1948§	1949¶
1,000 bushels						
North America:						
Canada	1,197	1,549	2,437	76	2,963	4,937
Cuba	*	*	*	1,917	4,276	4,812
Others	62	—	—	467	872	2,418
Total	1,259	1,549	2,437	2,460	8,111	12,167
South America	*	*	*	161	941	1,461
Europe:						
Austria		1	—	—	5,439	13,939
Belgium				—	—	—
Luxembourg	15	979	572	—	4,773	5,091
Denmark	606	202	2,280	—	3,331	†
Finland	18	—	—	65	366	110
France	52	1,386	1,474	—	2,631	3,438
Germany	60	272	6,969	—	8,016	45,231
Greece	—	—	—	—	14,342	—
Iceland	—	—	—	12	328	756
Ireland	—	—	—	—	656	—
Italy	*	4	852	2	257	37,278
Netherlands	2,006	484	1,760	17	878	10,318
Norway	113	—	488	—	—	—
Poland	—	—	—	—	9	49
Rumania	—	—	—	—	17	35
Spain	—	—	—	—	—	28,894
Sweden	604	*	—	106	5	—
Switzerland	—	1	111	50	1,905	4,249
Trieste	—	—	—	—	106	1,707
United Kingdom	59	—	—	1	3,406	202
Total	8,533	3,329	14,506	258	31,461	166,295
Asia:	*	1,618	5,943	27	1,399	2,953
Oceania	*	1	475	21	39	51
Africa	1	1	475	322	804	2,709
Total	4,793	6,497	23,361	5,234	42,755	185,636

† Crude and refined converted to crude.

‡ Not separately classified prior to 1937.

§ Preliminary.

¶ Less than 500 bushels.

** Less than .5 ton.

Compiled from official sources.

• SHORTENING SHIPMENTS. Reported by Institute of Shortening and Edible Oils, Inc., in pounds.

Week ending Apr. 1	5,892,530
Week ending Apr. 8	4,208,824
Week ending Apr. 15	3,263,540
Week ending Apr. 22	3,300,059

Grand total of standard shortening shipments for 1949 was 287,210,000 lbs., compared with 263,829,000 lbs. for 1948 and 311,925,000 lbs. in 1947.

Total of shortening and edible oil shipments for the

first quarter 1950 was 834,265,000 lbs., the Institute reports.

INSPECTIONS. Inspected receipts of soybeans in January were of somewhat better quality than those for the preceding month, according to reports to the Department of Agriculture. Seventy-nine percent of the January inspections graded No. 2 or better compared with 68 percent in December.

Inspected receipts of soybeans in February showed continued improvement in quality. Eighty-five percent of the February inspections graded No. 2 or better, the highest percentage since October when 36 percent fell in these grades. However, only 79 percent graded No. 2 or better for October through February compared with 73 percent last year.

Inspected receipts of soybeans in March were considerably greater than for the preceding month and above average. Inspections totaled 6,166 cars, compared with 4,331 cars the March average for the crop years 1943-47.

SOYBEAN STOCKS. Production and Marketing Administration's commercial grain stock reports for April.

	Apr. 3	Apr. 10	Apr. 17	Apr. 24
Atlantic Coast	835	670	1,145	1,306
Gulf Coast	297	802	430	897
Northwestern and Upper Lake	545	537	484	462
Lower Lake	5,427	4,843	4,697	4,519
East Central	1,528	1,060	1,348	1,279
West Central, Southwestern & Western	1,584	1,465	1,363	1,196
Total current week	10,216	9,377	9,467	9,659
Total Year ago	7,206	6,632	5,329	4,603

SUPPORT PROGRAM. A total of 15,232,253 bushels of 1949-crop soybeans has been put under the Commodity Credit Corporation price support program, U. S. Department of Agriculture announces, as follows:

Farm stored loans 4,640,479 bu.; warehouse stored loans 5,861,555 bu.; purchase agreements 4,730,219 bu.

Closing date for loans and purchase agreements was Jan. 31.

SEED IMPORTS. A total of 37,800 lbs. of soybean seed was imported into the U. S. under the Federal Seed Act during the July 1-Mar. 31 period, reports Production and Marketing Administration. All seed was imported from Canada.

The total compares with 365,400 lbs. for the July 1, 1948 to Mar. 31, 1949 period.

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"USE U. S. OIL ONLY IN MARGARINE"

Rumors and guesses and more-or-less vague reports have been spread that American manufacturers plan to use foreign oils in margarine. Some spokesmen for the dairy industry have been especially energetic in spreading such rumors in their attempts to head off repeal of the margarine laws. Below, the president of one of the nation's leading margarine manufacturing firms commits his company to continued use of U. S.-produced fats and oils.

—EDITOR.

TO THE EDITOR:

You recently directed our attention to a market service report which seemed to imply that this company is planning to use coconut oil in its margarine manufacture in the United States.

At the last meeting of the National Association of Margarine Manufacturers a statement was made by Mr. Arthur Hartog in which he pointed out that this company will endeavor to conduct its margarine business in the United States in the manner which will be in the best interest of both the country and the margarine industry.

We believe that the exclusive use of U. S. vegetable oils in the margarine we manufacture and market in the United States, will meet both of the above objectives.

We hope that a policy of using U. S. vegetable oils will be observed by the entire margarine industry. In our opinion, any other policy would be unrealistic and would ultimately result in great damage to the entire industry.

You may quote our position as expressed in this letter.—W. N. Barding, president Jelke Good Luck Products, division of Lever Bros. Co., New York, N. Y.

JAPANESE SOY GROUP

TO THE EDITOR:

I take the liberty of writing to you though I have not yet had the honor of your acquaintance. I am president of the Hokkaido Soybean Association in Japan. Since Hokkaido is the main district of soy-

bean production in our country, our Association was recently established with the purpose of improving the method of cultivation of soybeans and promoting their production.

So I am now very desirous to know about the present situation of your Association as a guide and reference for the activity of our Association.

Under separate cover I send you our publication, *Soybean Affairs*. It will be a pleasure to me if you gain something from it.—Koji Miyake, Hokkaido Soybean Association, Sapporo, Japan.

"CONSTANT REFERENCE"

TO THE EDITOR:

We are in receipt of your 1950 Soybean Blue Book, for which check in the amount of \$1.00 enclosed; and also would appreciate your sending this department three additional copies.

Upon preliminary perusal of this publication, we have found it to contain the answers to a great many questions which find their way to this department, and no doubt will be referring to it constantly, so may I thank you for calling this to our attention.—Shirley F. Johnson, Thompson & McKinnon, brokers, Chicago, Ill.

SOY OIL RESEARCH

TO THE EDITOR:

This is in reply to your inquiry as to the provisions for continuing the work on this soybean oil problem being done under contract at the University of Pittsburgh.

First let me say that our interpretation of the position taken by the Oilseeds and Peanut Advisory Committee with respect to the work on flavor stability of soybean oil is in general agreement with yours. The Committee clearly recommended not only that all currently active RMA work on oilseeds and peanuts be continued and be given first priority for available funds, but also that the work on flavor stability of soybean oil be accelerated.

I do not recall that there was any indication on the part of the Committee regarding how the flavor stability work should be maintained and accelerated. It was certainly

clear, however, that the Committee favored the continuation or expansion of work at the University of Pittsburgh as well as that under way within the Department unless the work could be conducted to better advantage in some other way.

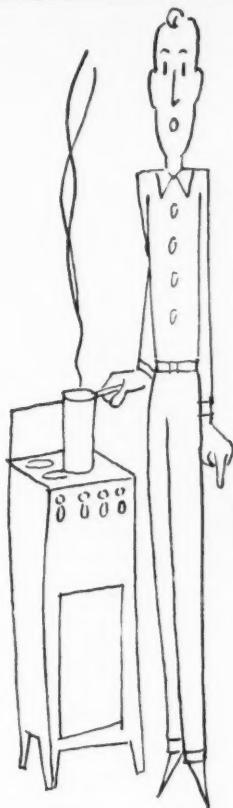
In view of the prospective appropriations, it may be extremely difficult for the Department to accelerate the work on flavor stability during the next (1950-51) fiscal year. Furthermore, it is too early to determine what the funds situation may be in 1951-52. However, I certainly hope it will be possible at least to maintain this work at the current level until some of the problems involved have been solved.

In reference to the work on flavor stability being done under contract, steps are now under way looking toward continuing the contract phases of the work for another 2 years at a level about the same as that existing at present. The Department people most familiar with the research on soybean flavor stability and those working on this problem at the University of Pittsburgh are said to feel that any additional contract funds devoted to the soybean flavor stability problem in the near future probably should be for work which is different from most of that now being done under the present contract.

If subsequent considerations substantiate this, the extension of the flavor stability contract research beyond that already provided for will probably involve a new contract rather than a revision and extension of the existing one. In view of the training and experience of the personnel and the facilities at the University of Pittsburgh, it is probable that the proposed work could be done most effectively there. However, if it were discovered that some other research agency were better qualified and equipped to do the particular work called for, the Department would, of course, be expected to award the contract to that agency assuming the amount requested for doing the work were not out of line with that requested by the University of Pittsburgh.

I presume, however, that your main concern, as well as of most others interested in the production and distribution of soybeans and soybean products, is that the work be pushed ahead as rapidly and as effectively as possible.—Maurice R. Cooper, Executive Secretary RMA Oilseeds and Peanut Advisory Committee, Agricultural Research Administration, Washington, D. C.

LETTERS



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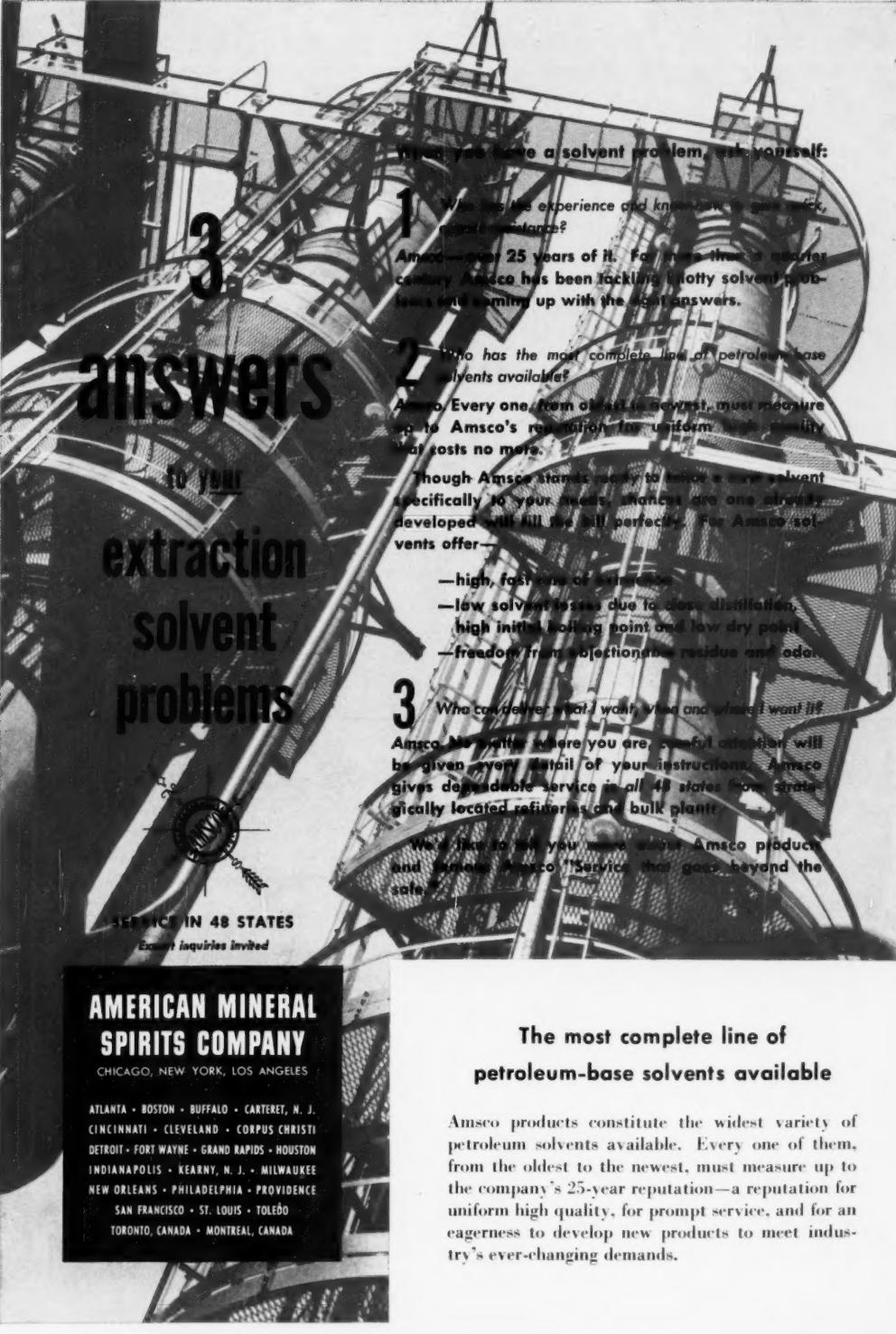
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